

***City of Glendale West Area Water  
Reclamation Facility  
Arizona Pollutant Discharge Elimination System  
Permit Discharge  
Project No. 012012***

[REDACTED]



**CLEAN WATER ACT  
MAG 208 AMENDMENT**

[REDACTED]





Maricopa Association of Governments  
Received

JUN 15 2005

June 13, 2005

Julie Hoffman  
Maricopa Association of Governments (MAG)  
302 North 1st Avenue, Suite 300  
Phoenix, AZ 85003

RE: MAG 208 Amendment  
City of Glendale West Area Water Reclamation Facility Expansion Project  
Glendale, Arizona

Dear Ms. Hoffman:

The City of Glendale is pleased to submit this request and supporting information for the above-referenced project in order to initiate the Maricopa Association of Governments (MAG) 208 Amendment process. The City of Glendale is a member of MAG and the West Area Water Reclamation Facility (WAWRF) is located within MAG's municipal planning area.

If you have any questions or require additional information, please contact me at (623) 930-3630.

Sincerely,

Russell Fletcher, P.E.  
Senior Civil Engineer  
WAWRF Expansion Project Manager

Rdf/RDF

Enclosures

cc: David Gordon, Malcolm Pirnie Inc., W/O enclosures

**CITY OF GLENDALE  
WEST AREA WATER RECLAMATION FACILITY  
ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT  
DISCHARGE  
PROJECT NO. 012012  
MAG 208 AMENDMENT**

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**CITY OF GLENDALE  
WEST AREA WATER RECLAMATION FACILITY  
ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT  
DISCHARGE  
PROJECT NO. 012012  
MAG 208 AMENDMENT**

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## 1.0 AUTHORITY

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In accordance with Section 208 of the Clean Water Act (CWA), the Maricopa Association of Governments (MAG) is the designated Regional Water Quality Management Planning Agency. The City of Glendale is the Designated Management Agency (DMA) for the Glendale planning area. The City of Glendale has requested a CWA Section 208 Amendment to the Regional Water Quality Management Plan for the Glendale West Area Water Reclamation Facility (WAWRF) to accommodate future effluent discharges into the New River under the Arizona Department of Environmental Quality (ADEQ) Arizona Pollutant Discharge Elimination System (AZPDES) permit program.

The following sections describe the existing WAWRF, the expansion, population projections, and regulatory requirements for the amendment as required in the CWA Section 208 Checklist. The 208 Checklist is provided as Table 1-1 with a reference to all sections where each item is addressed.

Table 1-1		
CWA Section 208 Checklist		
Requirement	Summary of How Requirements are Addressed	Section, Table, or Figure
<b>AUTHORITY</b>		
Proposed Designated Management Agency (DMA) shall self-certify that it has the authorities required by Section 208(c)(2) of the Clean Water Act to implement the plan for its proposed planning and service areas. Self-certification shall be in the form of a legal opinion by the DMA or entity attorney.	Glendale is the DMA for the service area addressed in this amendment.	1.0 (this amendment) and refer to Appendix C of the MAG 208 Water Quality Management Plan, October, 2002.
<b>20-YEAR NEEDS</b>		
<b>Clearly describe the existing wastewater (WWT) facilities:</b>		
<ul style="list-style-type: none"> <li>Describe existing WWT facilities.</li> </ul>	Primary screening, grit removal, extended aeration (includes nitrification/denitrification), sedimentation, filtration, UV disinfection, residual chlorination. Returns solid to 91 <sup>st</sup> Avenue WWTP, complete odor control, see text for additional information (4.3 mgd facility commissioned in 2000). The purpose of this amendment is to add an AZPDES surface water discharge to the New River for the WAWRF.	2.0, 2.1
<ul style="list-style-type: none"> <li>Show WWT certified and service areas for private utilities and sanitary district boundaries, if appropriate.</li> </ul>	There are no private WWT utilities within the WAWRF service area.	2.1.1
<b>Clearly describe alternatives and the recommended WWT plan:</b>		
<ul style="list-style-type: none"> <li>Provide POPTAC population estimates (or COG-approved estimates only where POPTAC not available) over 20-year period.</li> </ul>	Population estimates based on City of Glendale Planning Department Estimates as given in Glendale 2025: The Next Step General Plan (Community Sciences Corporation, 2002)	2.2
<ul style="list-style-type: none"> <li>Provide wastewater flow estimates over the 20-year planning period.</li> </ul>	Flow estimates provided based on SROG factors and population estimates.	2.3
<ul style="list-style-type: none"> <li>Illustrate the WWT planning and service areas.</li> </ul>	The WAWRF serves approximately 50 sq. miles of the City of Glendale jurisdiction. All areas served are within the incorporated areas of the City of Glendale. The WAWRF is not currently intended to serve areas within the strip annexation planning area West of the 115 <sup>th</sup> Avenue alignment. See Figure 2-1 for extents of the WAWRF service area.	Figure 2-1

**Table 1-1**

**CWA Section 208 Checklist**

<b>Requirement</b>	<b>Summary of How Requirements are Addressed</b>	<b>Section, Table, or Figure</b>
<ul style="list-style-type: none"> <li>Describe the type and capacity of the recommended WWT Plant.</li> </ul>	Primary screening, grit removal, extended aeration (includes nitrification/denitrification), sedimentation, filtration, UV disinfection, chlorination/dechlorination. Return solids to 91 <sup>st</sup> Avenue WWTP, complete odor control, see text for additional information. (Existing 4.3 mgd facility and expansion to 10 mgd include similar treatment processes).	2.4
<ul style="list-style-type: none"> <li>Identify water quality problems, consider alternative control measures, and recommend solution for implementation.</li> </ul>	No problems are anticipated. WAWRF treats typical municipal wastewater, City administers an industrial pre-treatment program, WAWRF treats to high level Class A+ level (ADEQ reclaimed water designation).	2.5
<ul style="list-style-type: none"> <li>If private WWT utilities with certificated areas are within the proposed regional service area: define who (municipal or private utility) serves what area and when. Identify whose sewer lines can be approved in what areas and when?</li> </ul>	There are no private WWT utilities with certificated areas within the WAWRF service area.	2.1.1
<ul style="list-style-type: none"> <li>Describe method of effluent disposal and reuse sites (if appropriate).</li> </ul>	Effluent is disposed by pumping reclaimed water off site to a number of locations, the locations that can accept the water include: (1) Recharge to existing City owned facility (2) Recharge to a proposed Salt River Project recharge facility (3) Direct non-potable reuse at locations such as Coyotes Arena ornamental lakes (occurring as of 2004) and City of Glendale Landfill (potential location) (4) Discharge to New River under an AZPDES permit. The surface discharge is the purpose for this MAG 208 amendment. Surface discharge is not in the current MAG 208 Plan	2.6
<ul style="list-style-type: none"> <li>If Sanitary Districts are within a proposed planning or service area, describe who serves the Sanitary Districts and when.</li> </ul>	There are no Sanitary Districts within the planning or service area.	2.1.1
<ul style="list-style-type: none"> <li>Describe ownership of land proposed for plant sites and reuse areas.</li> </ul>	City of Glendale owns for the parcel for the WAWRF expansion. Easements will be obtained for some offsite facilities.	Figure 2-6

**Table 1-1**

**CWA Section 208 Checklist**

<b>Requirement</b>	<b>Summary of How Requirements are Addressed</b>	<b>Section, Table, or Figure</b>
<ul style="list-style-type: none"> <li>Address time frames in the development of the treatment works.</li> </ul>	The 4.3 mgd facility was commissioned in June 2000. Construction on the 10 mgd expansion began in July 2003. The new 10 mgd facility testing and commissioning occurred April 2005-June 2005. Final acceptance of 10 mgd facility is expected in July of 2005. AZPDES river discharge will only be used on an as needed basis and will only be used once AZPDES permit is complete.	2.8
<ul style="list-style-type: none"> <li>Address financial constraints in the development of the treatment works.</li> </ul>	There are currently no financial constraints, see Section 5.0 for additional financial information.	5.0
<ul style="list-style-type: none"> <li>Describe how discharges will comply with EPA municipal and industrial stormwater discharge regulations (Section 405, CWA)</li> </ul>	Onsite stormwater detention/retention provides complete runoff control for the 100 year 2 hour storm event. Chemical tankage is contained within secondary containment.	2.9
<ul style="list-style-type: none"> <li>Describe how open areas &amp; recreational opportunities will result from improved water quality and how those will be used.</li> </ul>	The current and planned recharge uses result in open water bodies that have controlled access and are not intended for recreation or public access. Direct non-potable reuse may increase recreational opportunities by providing viewing areas near ornamental lakes or an irrigation source to parks and other turf areas while reducing potable water consumption.	2.10
<ul style="list-style-type: none"> <li>Describe potential use of lands associated with treatment works and increased access to water-based recreation, if applicable.</li> </ul>	Not applicable.	Not applicable.
<b>REGULATIONS</b>		
<ul style="list-style-type: none"> <li>Describe types of permits needed, including NPDES, APP and reuse.</li> </ul>	Permits required for WAWRF include: APP, Reuse, AZPDES, and Maricopa County construction approvals, operating permit and air permit.	3.1
<ul style="list-style-type: none"> <li>Describe restrictions on NPDES permits, if needed, for discharge and sludge disposal.</li> </ul>	All narrative and numeric water quality criteria for protection of aquatic life and wildlife ephemeral, partial-body contact, and agricultural livestock watering must be achieved for the New River. There will not be any type of sludge disposal associated with the AZPDES permit.	3.2



Table 1-1

## CWA Section 208 Checklist

Requirement	Summary of How Requirements are Addressed	Section, Table, or Figure
<ul style="list-style-type: none"> <li>Provide documentation of communication with ADEQ Permitting Section 30 to 60 days prior to public hearing regarding the need for specific permits.</li> </ul>	APP for expanded treatment works to 10 mgd is complete and signed. AZPDES has been submitted and is pending review once MAG 208 amendment is complete. Appendix E contains executed APP and latest correspondence on AZPDES.	Appendix E.
<ul style="list-style-type: none"> <li>Describe pretreatment requirements and method of adherence to requirements (Section 208 (b)(2)(D), CWA).</li> </ul>	City of Glendale maintains a pretreatment program including, monitoring and inspection that complies with 40 CFR Section 403.8.	3.3
<ul style="list-style-type: none"> <li>Identify, if appropriate, specific pollutants that will be produced from excavations and procedures that will protect ground and surface water quality (Section 208(b)(2)(K) and Section 304, CWA).</li> </ul>	No specific pollutants have been identified in the soil sampling conducted in support of the construction activity. Depth to groundwater is over 100 feet, no groundwater impacts are anticipated.	3.4
<ul style="list-style-type: none"> <li>Describe alternatives and recommendations in the disposition of sludge generated (Section 405, CWA and 40 CFR Part 503).</li> </ul>	All sludge produced as a result of WAWRF operations are conveyed in slurry form to the Sub-Regional Operating Group 91 <sup>st</sup> Avenue WWTP. The solids are processed at that location.	3.5
<ul style="list-style-type: none"> <li>Define any non-point issues related to the proposed facility and outline procedures to control them.</li> </ul>	All chemical facilities (tanks) are within secondary containment. Equipment drainage such as seal water goes to the plant sewer system.	2.9
<ul style="list-style-type: none"> <li>Describe process to handle all mining runoff, orphan sites and underground pollutants, if applicable.</li> </ul>	Not applicable.	Not applicable.
<ul style="list-style-type: none"> <li>If mining related, define where collection of pollutants has occurred, and what procedures are going to be initiated to contain contaminated areas.</li> </ul>	Not applicable.	Not applicable.
<ul style="list-style-type: none"> <li>If mining related, define what specialized procedures will be initiated for orphan sites, if applicable.</li> </ul>	Not applicable.	Not applicable.
<b>CONSTRUCTION</b>		
<ul style="list-style-type: none"> <li>Define construction priorities and time schedules for initiation and completion.</li> </ul>	4.3 mgd facility commissioned in June 2000, construction of 10.0 mgd facility commences July 2003, final commissioning and acceptance of 10.0 mgd facility expected April 2005-July 2005.	4.1
<ul style="list-style-type: none"> <li>Identify agencies that will construct, operate, and maintain the facilities and otherwise carry out the plan.</li> </ul>	City of Glendale will implement all plans associated with the WAWRF.	4.2

**Table 1-1**

**CWA Section 208 Checklist**

<b>Requirement</b>	<b>Summary of How Requirements are Addressed</b>	<b>Section, Table, or Figure</b>
<ul style="list-style-type: none"> <li>Identify construction activity-related sources of pollution and set forth procedures and methods to control, to the extent feasible, such sources.</li> </ul>	Pollutants associated with construction activities are expected to be limited to solid waste, inert materials, and residual construction materials such as paint or adhesives. The construction activities will be subject to stormwater permitting and will implement Best Management Practices. No bypass of untreated wastewater will be allowed.	4.3
<b>FINANCING AND OTHER MEASURES NECESSARY TO CARRY OUT THE PLAN</b>		
<ul style="list-style-type: none"> <li>If plan proposes to take over a certificated private utility, describe how and when financing will be managed.</li> </ul>	Not applicable.	Not applicable.
<ul style="list-style-type: none"> <li>Describe any significant measure necessary to carry out the plan (e.g., institutional, financial, economic, etc.)</li> </ul>	Glendale has planned for expansion by setting aside funds in its CIP and by collecting sewer user fees.	5.0
<ul style="list-style-type: none"> <li>Describe proposed method(s) of community financing.</li> </ul>	Sewer user fees.	5.0
<ul style="list-style-type: none"> <li>Provide financial information to assure DMA has financial capability to operate and maintain wastewater system over its useful life.</li> </ul>	See attached letter from the City of Glendale. Letter was submitted to ADEQ as part of Aquifer Protection Permit amendment application.	Appendix A
<ul style="list-style-type: none"> <li>Provide a time line that outlines the period of time necessary for carrying out plan implementation.</li> </ul>	WAWRF expansion to occur from July 2003 to January 2005. See Figure 5-1 for additional reclamation activities associated with WAWRF.	5.0, 2.8, Figure 5-1
<ul style="list-style-type: none"> <li>Provide financial information indicating the method and measures necessary to achieve project financing. (Section 201 CWA or Section 604 may apply.)</li> </ul>	See attached letter from the City of Glendale. Letter was submitted to ADEQ as part of Aquifer Protection Permit amendment application.	Appendix A
<b>IMPLEMENTATION</b>		
<b>Describe impacts and implementation requirements of the Plan:</b>		
<ul style="list-style-type: none"> <li>Describe impacts on existing WWT facilities (e.g. Sanitary district, infrastructure/facilities, and certificated areas).</li> </ul>	The construction activities will be staged to minimize WAWRF outage. The contract documents will contain a section that details how the contractor must provide for Maintenance of Plant Operations (MOPO's). This section is attached as Appendix B.	6.0, Appendix B

**Table 1-1**

**CWA Section 208 Checklist**

<b>Requirement</b>	<b>Summary of How Requirements are Addressed</b>	<b>Section, Table, or Figure</b>
<ul style="list-style-type: none"> <li>Describe how and when existing package plants will be connected to a regional system.</li> </ul>	Not applicable.	Not applicable.
<ul style="list-style-type: none"> <li>Describe the impact on communities and businesses affected by the plan.</li> </ul>	No impacts on communities and businesses are anticipated. Wastewater service will be maintained.	6.0
<ul style="list-style-type: none"> <li>If a municipal WWT system is proposed, describe how WWT service will be provided until the municipal system is completed (i.e., will package plants and septic systems be allowed and under what circumstances; interim services).</li> </ul>	Not applicable. WAWRF will remain in operation during construction.	6.0
<b>PUBLIC PARTICIPATION</b>		
<ul style="list-style-type: none"> <li>Submit copy of mailing list used to notify the public of the public hearing on the 208 amendment. (40 CFR, Chapter 1, Part 25.5)</li> </ul>	Public participation requirements will be satisfied through MAG.	7.0
<ul style="list-style-type: none"> <li>List location where documents are available for review at least 30 days before public hearing.</li> </ul>	Public participation requirements will be satisfied through MAG.	7.0
<ul style="list-style-type: none"> <li>Submit copy of the public notice of the public hearing as well as an official affidavit of publication from the area newspaper. Clearly show the announcement appeared in the newspaper at least 45 days before the hearing.</li> </ul>	Public participation requirements will be satisfied through MAG.	7.0
<ul style="list-style-type: none"> <li>Submit affidavit of publication for official newspaper publication.</li> </ul>	Public participation requirements will be satisfied through MAG.	7.0
<ul style="list-style-type: none"> <li>Submit responsiveness summary for public hearing.</li> </ul>	Public participation requirements will be satisfied through MAG.	7.0

## **2.0 20-YEAR NEEDS**

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The existing MAG 208 Regional Water Quality Management Plan (MAG, October 2002) identifies an ultimate planning capacity of 15 million gallon per day (mgd) for the WAWRF with the treated effluent being utilized for recharge or reuse. The City of Glendale is experiencing significant growth in the WAWRF service area; therefore, the City plans to expand the plant capacity but not beyond the 15 mgd already identified in the MAG 208 Plan. The expansion will increase the treatment capacity from 4.3 mgd to 10 mgd (annual average flow (AAF) of 10 mgd with a maximum month flow (MMF) of 11.5 mgd), however, the City of Glendale will maintain the WAWRF as a potential 15 mgd facility. As an interim measure, prior to completion of an expansion, the City has re-rated the WAWRF to a sustained flow of 7.0 mgd. The entire effluent flow from the existing WAWRF is recharged at the City's West Area Aquifer Recharge Facility (WAARF). The Glendale WAWRF has been processing wastewater at a constant flow of approximately 7.0 mgd since September 2002.

### **2.1 DESCRIPTION OF EXISTING WASTEWATER TREATMENT FACILITIES**

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The following sections describe the WAWRF service area and existing treatment process.

#### **2.1.1 Site Setting and Service Area**

The City of Glendale has three major facilities available for treatment of wastewater generated within the service area east of 115<sup>th</sup> Avenue. They are:

- Arrowhead Ranch Water Reclamation Facility (WRF), owned and operated by the City of Glendale.
- WAWRF, owned and operated by the City of Glendale.
- 91<sup>st</sup> Avenue Wastewater Treatment Plant (WWTP) owned and operated by the Sub-Regional Operating Group (SROG).

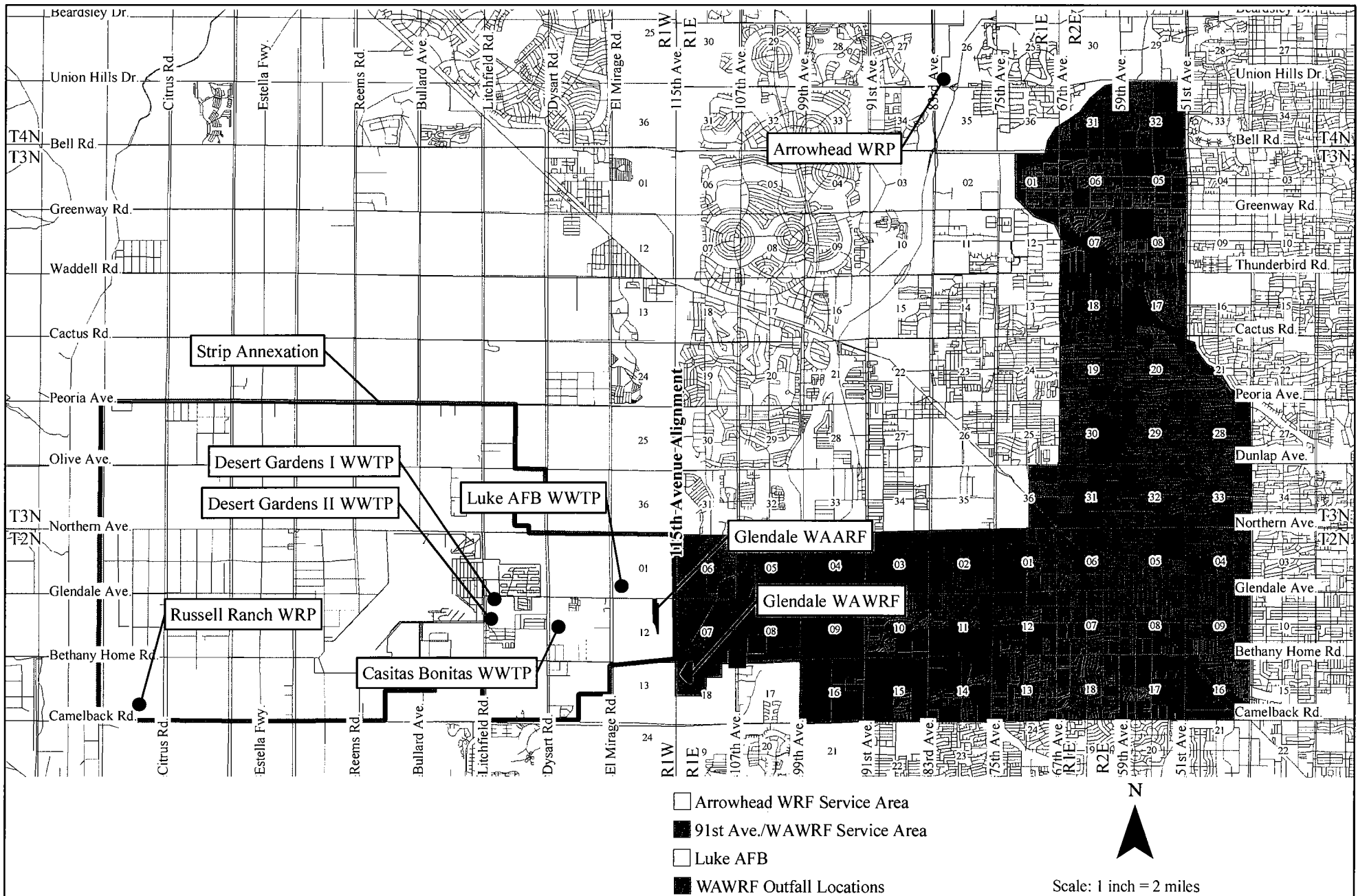
Figure 2-1 shows the location of the facilities within the Glendale Municipal Planning Area. There are no private WWT utilities with certificated areas or sanitary districts within the WAWRF service area and therefore there are no plans for connecting private WWT utilities to the WAWRF system. This amendment request relates to adding an AZPDES discharge as a method of effluent disposal for the WAWRF.

### **2.1.2 Existing Treatment Facilities**

The Glendale WAWRF is located at 5901 N. Glen Harbor Blvd; Glendale, Arizona. The WAWRF was completed and began treating wastewater in June 2000. The wastewater is treated to the level consistent with Class A+ reclaimed water as defined by Section R18-11-303 in the State of Arizona Administrative Code. Figure 2-2 shows a process flow schematic of the existing facility; the process is described below.

The Raw Sewage Pump Station (RSPS) pumps flow from the Camelback sewer at 99th Avenue and Camelback Road and discharges at the WAWRF. Historically, the WAWRF has treated a steady flow (approximately 4.3 mgd from 6/2000 through 9/2002, and 7.0 mgd from 10/2002 to present), with any diurnal peaks remaining in the sewer. Sewage in the interceptor that is not pumped to the WAWRF flows to the 91st Avenue WWTP for treatment. Glendale anticipates continued operation in this manner, however, the WAWRF is now designed and will be designed to handle any diurnal peaks. Glendale will permit the expanded facility at 11.5 mgd MMF in all permits to allow the City maximum flexibility relative to plant intake and subsequent reclaimed water production.

Raw sewage enters the south end of the WAWRF via a 24-inch force main, passes through rotating bar screens with screw conveyor and a grit handling facility. A flow splitter structure is provided to equally split flow to each aeration basin. The aeration basins are sized based on an extended aeration process, which operates at lower organic loadings, long aeration times, and does not require primary sedimentation. The aeration basins are equipped with intermediate mixed liquor recycle pumps and anoxic/aerobic zones to facilitate denitrification/nitrification. Mixed liquor from the aeration basins

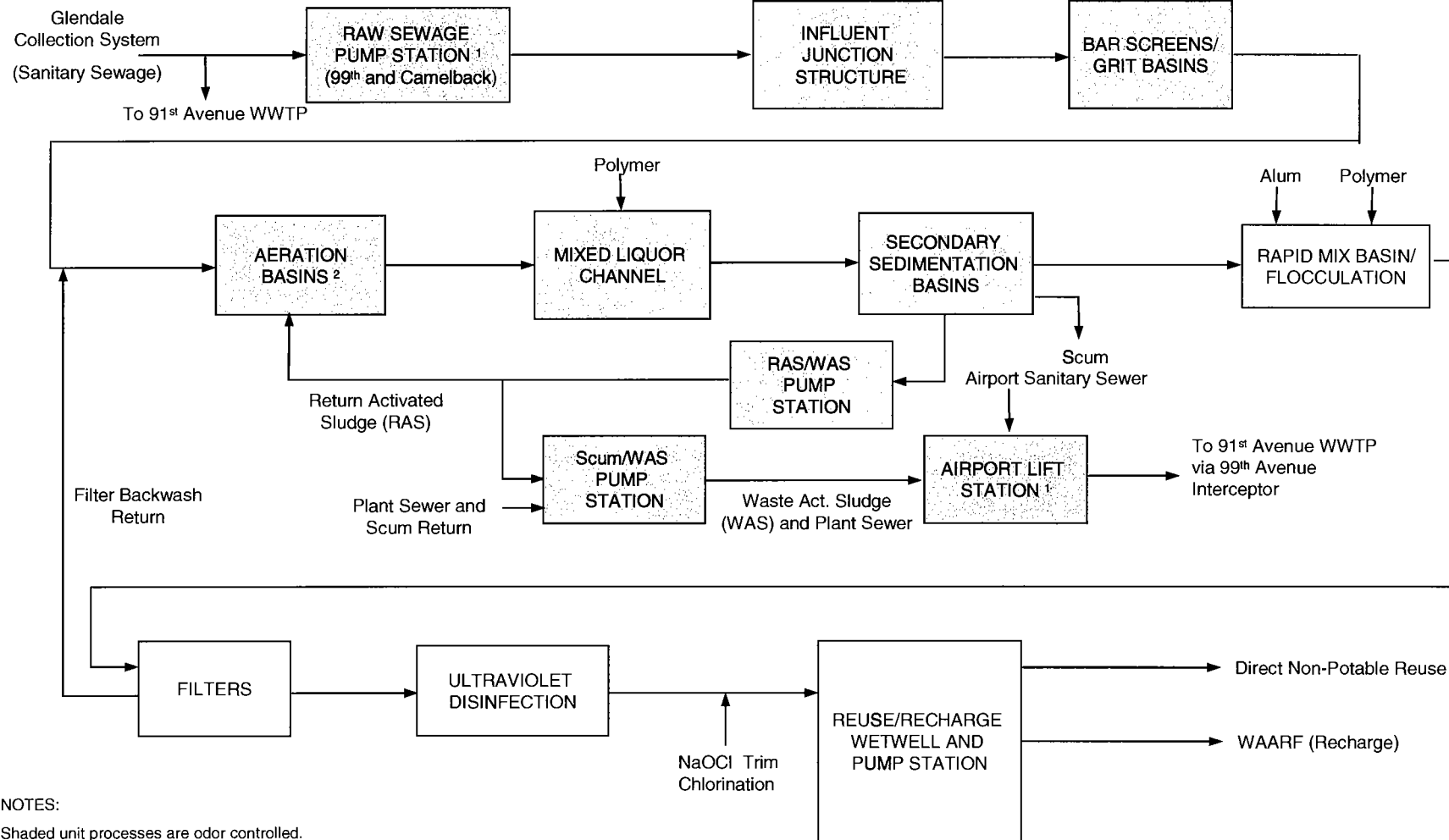


**MALCOLM  
PIRNIE**

CITY OF GLENDALE - MAG 208 AMENDMENT  
GLENDALE PLANNING AREA AND WAWRF SERVICE AREA

JULY 2005

FIGURE 2-1



NOTES:

Shaded unit processes are odor controlled.

1. These facilities are located remotely to the WAWRF.
2. Includes nitrification/denitrification

flows to secondary sedimentation basins for clarification. Settled sludge is drawn from the bottom of the sedimentation basins and returned to the aeration basins.

A portion of the sludge is wasted to the Scum/Waste Activated Sludge (WAS) Pump Station, which pumps to the offsite Airport Lift Station. The Airport Lift station pumps flow to a gravity sewer that flows to the 91st Avenue WWTP. Clarified secondary effluent flows through deep bed gravity filters then through the ultraviolet (UV) disinfection facility. Trim chlorination can be applied prior to pumping to recharge or reuse. The WAWRF has the capability to add polymer and alum as coagulant aid but these facilities have not historically been utilized given acceptable effluent quality.

At this time, the majority of the effluent from the WAWRF is recharged to the underlying aquifer at the WAARF located near the WAWRF; a portion of the effluent is being reused directly. Ongoing monitoring of the surrounding water surface elevations and groundwater modeling suggests the WAARF can accommodate a recharge rate in excess of what was originally permitted (4.3 mgd). Aware of this, the City of Glendale has re-rated the facility to 7.0 mgd (Errol L. Montgomery and Associates, 2002) to meet the re-rated effluent flow from the WAWRF. The City will continue to monitor and utilize the WAARF to a level that is technically feasible and acceptable to ADWR through the Underground Storage Facility Permit program and Water Storage Permit agreements, through ADEQ's Aquifer Protection Permit program, and in accordance with Maricopa County Environmental Service Department's Approval of Construction.

## **2.2 POPULATION ESTIMATES**

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The City of Glendale recently updated the Glendale General Plan; the General Plan is used to guide development and capital investment throughout Glendale's jurisdiction. This recent General Plan updated the 1989 General Plan and provides a guide until the year 2025 (Community Sciences Corporation, 2002). The Plan was written in accordance with Arizona State Legislature requirements under the Growing Smarter Act of 1998 and the Growing Smarter Plus Act of 2000. The General Plan



reports the following population information for the current City of Glendale service area east of 115<sup>th</sup> Avenue:

- 2002 population estimate – 226,622
- 2025 population estimate – 264,842

The population above is bounded by the area shown in Figure 2-1 and is served by the Arrowhead Ranch WRF, WAWRF, and 91<sup>st</sup> Avenue WWTP. These estimates do not include populations within the Glendale Strip Annexation area. The City of Glendale Planning Department has estimated the build out population of 264,842 may be reached as early as 2008. Based on this assumption the Engineering Department continues to plan and implement wastewater treatment and collection services based on a 2008 planning horizon of 260,000 people.

### **2.3 WASTEWATER FLOW ESTIMATES**

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A portion of the City of Glendale's wastewater is conveyed to the SROG 91<sup>st</sup> Avenue WWTP. SROG members include Glendale, Mesa, Phoenix, Scottsdale, and Tempe. Based on operational history, SROG establishes flow and loading criteria for its member cities to follow when they are planning wastewater collection or treatment facilities. Table 2-1 presents the estimated wastewater flows from the City of Glendale's service area east of 115<sup>th</sup> Avenue, Table 2-1 also provides information on how the city of Glendale anticipates its wastewater treatment facilities will be utilized to meet the wastewater treatment requirements.

<p align="center"><b>Table 2-1</b></p> <p align="center"><b>Wastewater Flow Projections for the City of Glendale East of 115<sup>th</sup> Avenue and Allocation Among WWTPs</b></p>					
Year	Population East of 115 <sup>th</sup> Avenue	SROG 91 <sup>st</sup> Ave. WWTP (mgd)	Arrowhead WRF (mgd) <sup>3</sup>	WAWRF (mgd)	Total Flow (mgd)
2000 <sup>1</sup>	202,300	13.0	2.66	4.05	19.71
2010 <sup>2</sup>	260,000	10.17 – 13.2	4.33	10.85 – 7.82	25.35
2020 <sup>2</sup>	260,000	9.96 – 13.2	4.54	10.85 – 7.61	25.35

1. Based on projected SROG service populations and flow, Appendix C, WWTP 25-year Facilities Master Plan (Greeley and Hansen, 2002). Arrowhead WRF and WAWRF flows shown are the net flow treated (influent minus residuals). Arrowhead residuals assumed to be 0.04, 0.06, 0.06 mgd in 2000, 2010, and 2020 respectively. WAWRF residuals assumed to be 0.3, 0.6, 0.6 mgd in those same respective years.
2. Population based upon Glendale General Plan (Community Sciences Corporation, 2002)
3. City of Glendale West Area Water Reclamation Facility Strategic Plan Technical Memorandum (Malcolm Pirnie, Inc., 2002a)

Table 2-1 is based on the following assumptions:

- Flow shown for Arrowhead WRF and WAWRF is the net treated flow, equal to plant influent minus residuals passed on to 91<sup>st</sup> Avenue WWTP. Arrowhead WRF residual flow was assumed to be 0.06 mgd, and the WAWRF residual flow was assumed to be 0.65 mgd.
- Current Glendale capacity of 13.2 mgd in the SROG system is maintained.
- The SROG flow factor for the City of Glendale of 97.5 gallons per person per day is used and applicable.
- Flow shown for SROG facility includes residual flows.

Table 2-1 shows the WAWRF expansion to 10 mgd AAF/11.5 mgd MMF in conjunction with the Arrowhead WRF and 91<sup>st</sup> Avenue WWTP will provide adequate wastewater treatment service for the current service area east of 115<sup>th</sup> Avenue. The City will maintain the WAWRF as a potential 15 mgd facility in all planning efforts for additional wastewater treatment or reclamation activities.

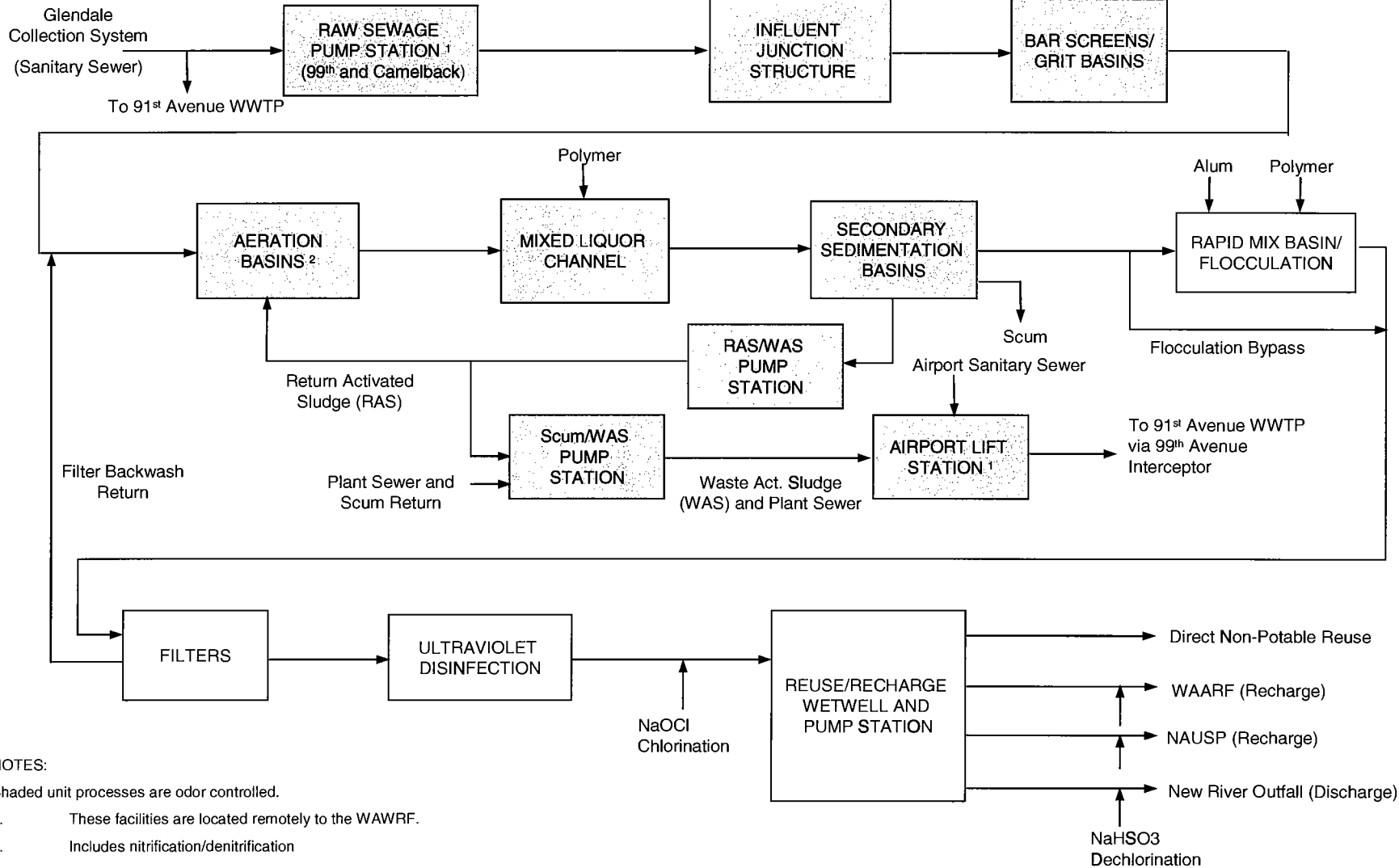
## **2.4 10 MGD WAWRF**

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The wastewater will continue to be treated to the level consistent with Class A+ reclaimed water as defined by Section R18-11-303 in the State of Arizona Administrative Code. The process flow schematic for the expanded facility is similar to the current system and consists of the following treatment units:

- Influent Pumping Station
- Screenings Removal System
- Grit Removal System
- Flow Meter Vault
- Blowers and Aeration Basins (including nitrification/denitrification)
- Secondary Sedimentation
- RAS/WAS Pumping Station
- Scum/WAS Pumping Station
- Rapid Mixing
- Flocculation
- Filtration
- UV Disinfection
- Chlorination/Dechlorination

The following is an abbreviated summary of improvements that will be done for the expansion of the WAWRF. For more detailed design information, refer to the Final Preliminary Design Report (Malcolm Pirnie, 2002). A process flow diagram of the expansion is shown on Figure 2-3. New pumps and piping will be incorporated into the existing Influent Pumping Station. Additional screens, modifications, and replacement screens will be incorporated into the Screenings Removal System. Two additional aeration basins will be added for the biological treatment process. The biological treatment process includes accommodations for nitrification/denitrification. A blower unit will be added to the existing Blower Building. Three secondary sedimentation basins will be added. Additional capacity will be added to the existing RAS/WAS Pump



NOTES:

Shaded unit processes are odor controlled.

1. These facilities are located remotely to the WAWRF.
2. Includes nitrification/denitrification

Station and to the Scum/WAS Pump Station. Four additional filters will be provided and a rapid mix/flocculation bypass line will be constructed. More UV lamps and modules will be added to disinfect the treated effluent within design criteria established by ADEQ guidelines to achieve Class A+ reuse water. The chlorination system will be modified to provide increased redundancy relative to pathogen removal downstream of the UV system. A dechlorination system will be added utilizing Sodium Bisulfite ( $\text{NaHSO}_3$ ) to remove residual chlorine. Figure 2-4 shows the site plan with the 10 mgd AAF expansion and planning space available for a 15 mgd AAF facility.

## **2.5 WATER QUALITY, CONTROL MEASURES, IMPLEMENTATION**

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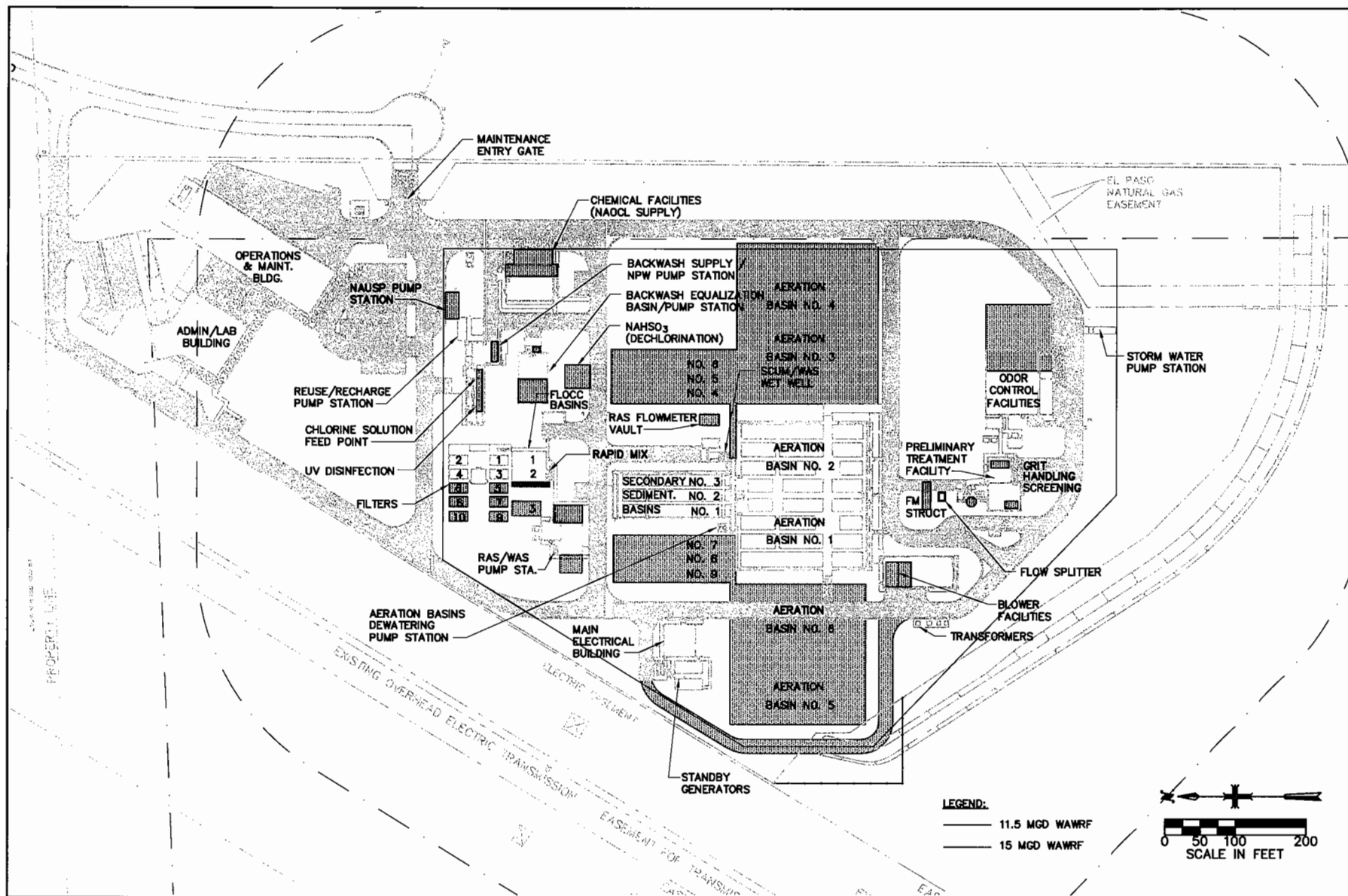
The WAWRF service area is predominantly residential and commercial with some light industrial sewer contributions. The following methods are used by the City of Glendale and at the WAWRF as a system wide approach to water quality management:

- Active industrial pretreatment program intended to minimize unknown or undesirable discharges to the municipal sewer system.
- WAWRF designed to meet the Best Available Demonstrated Control Technology (BADCT) requirements. This includes the use of filtration to produce a Class A+ quality effluent.
- Routine monitoring and operations in accordance with Maricopa County approved operating plans and Aquifer Protection Permit monitoring requirements.

## **2.6 METHOD OF EFFLUENT DISPOSAL AND REUSE SITES**

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The majority of the effluent currently generated at the WAWRF is recharged at the WAARF with some of the effluent being reused directly at the Coyotes Lakes on Glendale Avenue (see Section 2.6.3 and Figure 2-5). The City will continue to monitor water levels below the WAARF and utilize the WAARF to the fullest extent technically possible. Upon plant expansion to 10 mgd, Glendale will be required to find additional end uses for the effluent. Glendale has investigated a number of end uses (Malcolm Pirnie, 2003) and has planned to provide the following means of effluent use, in addition



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CITY OF GLENDALE – MAG 208 AMENDMENT  
WAWRF SITE PLAN

JULY 2005

FIGURE 2-4

to the current capacity at the WAARF. Figure 2-5 shows the locations of the end uses planned by Glendale.

### **2.6.1 Monitoring and Re-rating of the WAARF**

The WAARF was originally established as a recharge facility capable of receiving 4.3 mgd of effluent. Field observations of water levels below the recharge facility at the 4.3 mgd flowrate suggest the recharge site can accommodate additional flow. In 2002, to accommodate the re-rating of the WAWRF to 7.0 mgd, groundwater modeling of the mound under the recharge facility was conducted. The modeling was an update (with current data) to the groundwater model used during design of the facility. The modeling suggested the WAARF could receive 7.0 mgd for approximately three to five years at which time the recharge rates would have to be tapered back to a sustainable level of approximately 5.4 mgd. ADWR, ADEQ, and Maricopa County Environmental Services Department were made aware of this effort and the WAARF was re-rated to 7.0 mgd in 2002. The recharge facility has been operating at approximately 7.0 mgd for more than 14 months (9/02 to 1/04) and the water levels below the facility continue to be favorable (i.e., mounding is not as significant as model results) suggesting the modeling assumptions are conservative and recharge rates greater than 7.0 mgd maybe feasible. In 2004, the City of Glendale pursued re-rating the WAARF to 10.0 mgd to receive the majority of the effluent from the expanded WAWRF.

### **2.6.2 Recharge at the NAUSP**

The Salt River Project (SRP) is developing a recharge project near the WAWRF (Black & Veatch, 2001). The project known as the New River-Agua Fria Underground Storage Project (NAUSP), will receive excess surface water delivered to the recharge project via the Grand Canal. SRP is in the process of finalizing the location, design, and permitting associated with the NAUSP. Glendale and SRP are also finalizing details regarding placing reclaimed water into the SRP basins. The WAWRF expansion design includes provisions to discharge treated effluent to the NAUSP as required. The NAUSP is expected to eventually recharge 75,000 acre-ft/year of excess surface and reclaimed water. Glendale will own a 20 percent of the ultimate recharge capacity.



## FIGURE 2-5



### **2.6.3 Direct Non-Potable Reuse**

Facilities were installed during the initial WAWRF construction to convey approximately 0.8 mgd of reclaimed water to a location near 99<sup>th</sup> and Glendale Avenue. The City has begun to connect direct reuse customers in that area starting with the ornamental lakes at the Coyotes Hockey Arena. Reuse at this location is being conducted under a Type 2 Reclaimed Water General Permit for Class A+ (#R105411). Glendale is considering connecting additional reclaimed water customers near 99<sup>th</sup> and Glendale Avenue in the future, including the Glendale Landfill as shown in Figure 2-5.

### **2.6.4 Discharge to the New River**

In the event the WAARF, NAUSP, or direct reuse cannot receive all of the reclaimed water generated at the WAWRF the water will be sent to an outfall location located on the edge of the New River River. Normal operations would not utilize this end use because the reuse benefit (stored water credits) would be lower compared to other recycling options; however, this would be used on an as needed basis. NAUSP may also discharge into the New River as part of the facility basins.

## **2.7 OWNERSHIP**

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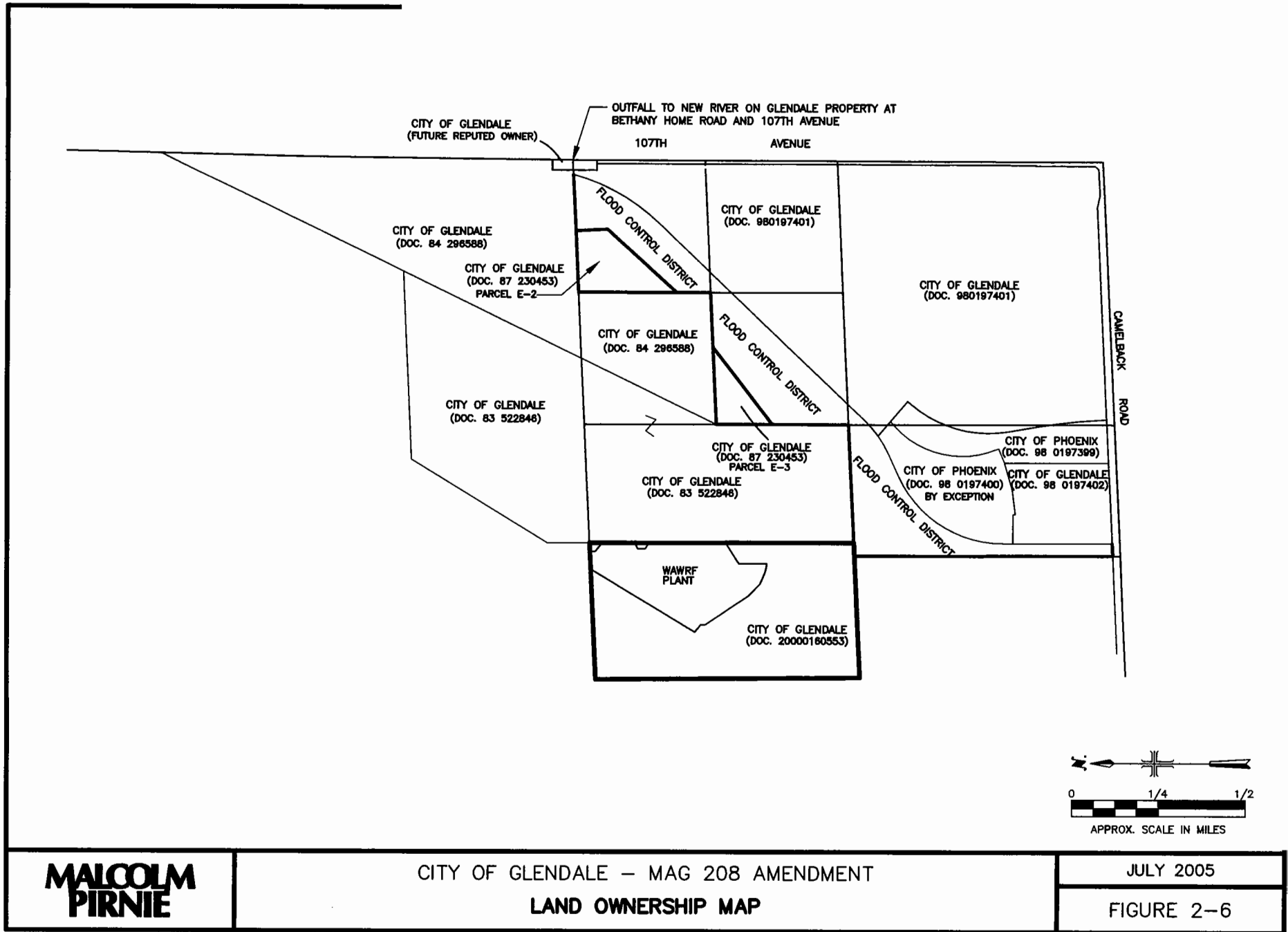
Glendale owns the property where the WAWRF expansion will occur. Some offsite piping and conveyance systems may require easements. Temporary construction or permanent easements will be obtained as required for piping to the AZPDES discharge at the New River. Figure 2-6 presents property surrounding the WAWRF.

## **2.8 TIME FRAMES**

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The following milestones have been realized and are expected to be implemented for wastewater treatment and reclamation related to the WAWRF:

- June 2000 – WAWRF and WAARF commissioned and began treating 4.3 mgd.



- September 2002 – WAWRF and WAARF re-rating complete, 7.0 mgd steady flow begins.
- April 2002 – WAWRF expansion project began including Preliminary Design and Water Recycling Master Plan.
- December 2002 – Preliminary Design completed for 11.5 mgd MMF facility.
- February 2003 – Draft Water Recycling Master Plan completed.
- April 2003 – Construction Manager (CM) at Risk provides City of Glendale Guaranteed Maximum Price (GMP).
- July 2003 – Construction begins on 10 AADF mgd facility.
- April 2005 – June 2005– Commissioning of expanded facility.
- July 2005 – Estimated final acceptance by City of Glendale.

During the period of 2003-2005 the Water Recycling Master Plan recommends the City of Glendale develop policies and procedures to implement more extensive direct non-potable reuse of the treated effluent. If the City elects to more extensively connect direct reuse customers, the Water Recycling Master plan has identified additional infrastructure recommendations including a storage tank and booster station near 99<sup>th</sup> and Glendale to be part of the reclaimed water distribution system (Malcolm Pirnie, 2003).

## **2.9 STORMWATER**

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Onsite retention is provided for the 100 year 2 hour storm event as directed by the Flood Control District of Maricopa County (Flood Control District of Maricopa County, 1995). The WAWRF also holds a stormwater NPDES permit as an wastewater treatment plant with a flow over 1.0 mgd. All chemical tanks on-site are contained within concrete containment structures. The drains within these structures are not hydraulically connected to the stormwater drainage or off site drainage system. The containment drains are routed to the plant process or plant sewer depending on their location.

## **2.10 RECREATIONAL ACTIVITIES**

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The current and planned recharge end uses result in open water bodies that have controlled access and are not intended for recreation or public access. Direct non-potable reuse may increase recreational opportunities by providing viewing areas near ornamental lakes or an irrigation source to parks and other turf areas while reducing potable water consumption.

## 3.0 REGULATIONS

### 3.1 REQUIRED PERMITS

Table 3-1 presents the permits applicable to elements of the WAWRF expansion.

<b>Table 3-1 Required Permits<sup>1, 2</sup></b>					
Permit (Agency)	Site or End Uses (Discharge) Requiring Permit				
	WAWRF	WAARF	NAUSP	Direct Reuse	New River Outfall
APP (ADEQ)	103580	103611	X		X
AZPDES (ADEQ)			X		X
Underground Storage Permit (ADWR)		71-586730	X		
Water Storage Permit (ADWR)		73-586730	X		
Reclaimed Water Permit (ADEQ)				R105411	
Army Corp of Engineers 404 Permit <sup>3</sup>			X		
Air Quality Permit (MCESD)	00-0172				
Approvals to Construct (MCESD)	2010890 (Plan# for 11.5 mgd expansion)	980648	X	X (multiple permit #s)	2011084
Approvals of Construction (MCESD)	(will be acquired prior to commission)	980648	X	X (multiple permit #s)	(will be acquired at completion)
Right-of-Way Use Permit (FCDMC)			X		X
Annual Operating Permit (MCESD)	X				

1. APP=Aquifer Protection Permit, MCESD=Maricopa County Environmental Services Department, FCDMC=Flood Control District of Maricopa County, ADEQ=Arizona Department of Environmental Quality, AZPDES=Arizona Pollutant Discharge Elimination System, ADWR=Arizona Department of Water Resources
2. Numbers in table reference existing permits, an "X" means the permit is required based on current information.
3. SRP will be obtaining 404 permit for the NAUSP if it is required pending final location of recharge.

From Table 3-1 the following is summarized regarding how the permits will be obtained and who will be the responsible party for the permits.

- Two APP's will be held by the City of Glendale. One specific to the WAARF and one for the WAWRF; existing permits are executed for the existing facilities (No. P-103611 and No. P-103580 respectively). The WAWRF APP will be amended to allow for the expansion activities, all discharge locations will be noted in the WAWRF APP.
- The City of Glendale will acquire AZPDES permits for its discharge to the New River and its discharge into SRP's NAUSP facility (if required).
- SRP will obtain and hold Underground Storage Facility (USF) Permit and an NAUSP specific APP for it's operation of the NAUSP.
- The City of Glendale will obtain a Water Storage Permit to allow for accrual of stored water credits placed into the NAUSP.
- The City of Glendale will obtain reclaimed water permits, air quality permits, construction approvals, and right-of-ways as needed. It is SRP's responsibility to submit its plans for the NAUSP to Maricopa County for an approval to construct.

### 3.2 AZPDES ASSESSMENT

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As part of the AZPDES permit process, Malcolm Pirnie, Inc., performed a water quality study of existing data for the New River. The water quality study found that the New River is an ephemeral wash at the proposed discharge locations. The river is typically dry throughout the year and only flows after a significant rainfall event. Maricopa County Flood Control District reports minimal flows less than 30 days out of a year for the river. No available background water quality exists for the ephemeral wash, nor is it required by the ADEQ.

Appendix B of Arizona Administrative Code (AAC) R18-11—*List of Surface Waters and Designated Uses* describes the designated uses for these segments of the rivers are identified as:

- **New River**—Aquatic and Wildlife ephemeral (AWe), Agricultural Livestock Watering (AgL), and Partial-Body Contact (PBC);

Therefore, all narrative and numeric water quality criteria for protection of aquatic life and wildlife ephemeral, partial-body contact, and agricultural livestock watering must be achieved for the New River.

Because the discharge consists only of treated effluent with Class A+ reclaimed water designation, it will not contain putrescible solids, floating solids or oils, odor, color, or any other nuisance-causing or toxic compounds. Thus, the discharge will have a *de minimis* impact on the narrative water quality criteria identified in the AAC R18.

This segment of the New River is not listed as either unique waters, nor effluent dependent waters (EDW) by the ADEQ (Appendix B of AAC R18-11). However, ADEQ has indicated that a NPDES permit to discharge to an ephemeral wash not previously classified as a EDW will be written using EDW standards.

### **3.3 PRETREATMENT REQUIREMENTS**

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40 CFR Section 403.8 states that any Publicly Owned Treatment Works (POTW) with a total design flow greater than 5 MGD and receiving pollutants from industrial users that pass through or interfere with the operation of the POTW, or are otherwise subject to Pretreatment Standards, are required to establish an EPA approved POTW Pretreatment Program. Effluent generated by the industrial users in the City of Glendale is currently discharged to the WAWRF and to the 91<sup>st</sup> Ave WWTP. Currently, the WAWRF and the 91<sup>st</sup> Ave WWTP both have EPA-approved Pretreatment Programs and comply with all pretreatment requirements.

### **3.4 EXCAVATION CONTAMINANT CONCERNS**

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Geotechnical investigations in support of the expansion design yielded no contaminated material. The area occupied by the WAWRF was not previously occupied by any buildings and is not expected to have contaminated soils. No problems regarding contaminated soil were observed during the original plant construction. The depth to

groundwater is over 100 feet suggesting the groundwater will be protected from any type of construction activity.

### **3.5 SLUDGE MANAGEMENT REQUIREMENTS**

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Waste sludge from the treatment process (biosolids) are conveyed to the 91<sup>st</sup> Avenue WWTP where the sludge is handled and disposed according to regulations. The WAWRF does not currently have and will not have any solids handling, treatment, or disposal facilities.



## **4.0 CONSTRUCTION**

### **4.1 SCHEDULE**

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The construction schedule is expected to begin as follows:

- July 2003 – Construction began on WAWRF expansion to 10.0 mgd
- March 2005 to July 2005 – Commissioning and acceptance of expanded 10.0 mgd facility

Intermediate construction milestones for various components of the expansion will be developed by the contractor at the beginning of the project and as the work progresses.

### **4.2 CONSTRUCTION AND OPERATION RESPONSIBILITY**

---

The City of Glendale will develop and implement the plan for construction, operation, and maintenance of the expansion to the Glendale WAWRF. The City maintains operations staff qualified for operation of wastewater treatment and collections systems. The City Engineering Department will oversee the plant construction with assistance from the design engineer providing field inspections as required. Additionally Maricopa County Environmental Service Department (MCESD) and ADEQ will have access to the site on an as needed basis to provide inspection of the work as it progresses.

### **4.3 CONSTRUCTION RELATED POLLUTION CONTROL**

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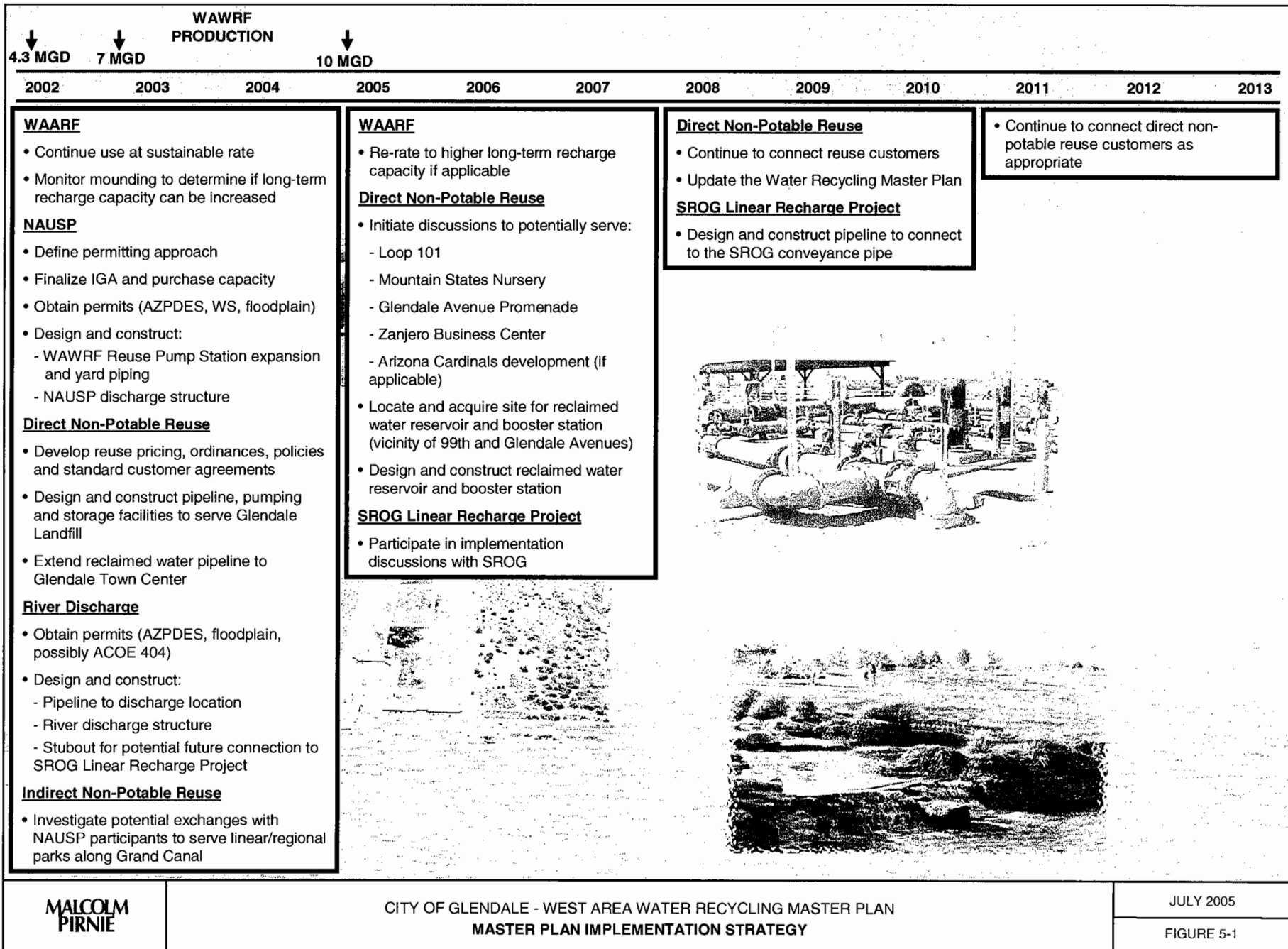
The Contractor will be required to comply with all applicable Federal, State, County, and City regulations for construction activities at the site. This includes securing dust control permits (Maricopa County) and stormwater pollution prevention permits (USEPA). Contractor compliance with these regulations will be monitored by the City of Glendale or the design engineer acting as the City's representative.

## **5.0 FINANCING PLAN**

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The City of Glendale has programmed funds into its Capital Improvement Program (CIP) budget to accommodate the WAWRF expansion. These funds are generated through user fees charged for sewer service. The City currently has budgeted \$31.5 million dollars for expansion of the WAWRF and offsite facilities (does not include potential storage as part of a reclaimed water distribution system). Appendix A is a letter from the City of Glendale stating their CIP funding levels for the WAWRF expansion.

A timeline for implementation of the Glendale WAWRF expansion activities are provided in Section 2.8. Figure 5-1 summarizes conceptually the implementation of water reclamation activities in areas served by the WAWRF.



## **6.0 IMPACTS AND IMPLEMENTATION**

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The effect of implementing the expanded 10.0 mgd facility and the associated New River outfall is not expected to impact the operation of any adjacent municipality, nor any existing sanitary district or certified area, or any communities or businesses. The construction activities will be staged in order to minimize WAWRF outage. Appendix B contains contract documents that give details regarding how the contractor must provide for Maintenance of Plant Operations (MOPO's). The high quality effluent will have very little organic content and therefore will be unlikely to produce odors. The effluent reuse, recharge, or discharge to New River is not anticipated to create a noticeable insect population or odor. Letters of No Objection were obtained from all cities and entities whose planning areas are within three miles of the WAWRF (Figure D-1), except for the City of El Mirage. Contact was made with the City of El Mirage regarding this document; however, they declined to submit a letter of no objection. The letters have been included in Appendix D.

## **7.0 PUBLIC PARTICIPATION**

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As part of the MAG Water Quality Management Plan Amendment Process, the Maricopa Association of Governments (MAG) with the cooperation of the City of Glendale is responsible for ensuring that the following actions are implemented after submittal of the MAG 208 Amendment:

- Submittal of a mailing list that will be used to notify the public of the hearing on this 208 Amendment. The City of Glendale anticipates using its mailing list developed as part of the Project WATERS (Wastewater Alternatives to Ease Rate Structures) public notification effort. Project Waters refers to all elements of the West Area Water Reclamation project (treatment plant, recharge, etc.) with a special emphasis on public involvement and notification. Appendix C displays copies of the most recent newsletters sent out as part of the Project Waters effort.
- 30-day notification to the public of the location where documentation pertaining to this 208 Amendment is available for review.
- Publication of a public notice with information on the date, time, subject, and location of the public hearing on this 208 Amendment at least 45 days prior to the hearing.
- Submittal of an affidavit of publication of the public notice.
- Submittal of a responsiveness summary for the public hearing.

## 8.0 REFERENCES

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- Black and Veatch, 2001. *Recycled Water Assessment*. Prepared for the Salt River Project. May 23, 2001.
- Carollo Engineers, 2002. *208 Water Quality Management Plan*. Prepared for the Maricopa Association of Governments. October, 2002.
- Community Sciences Corporation in association with The WLB Group, Inc. and Elliott D. Pollack & Company, 2002. *Glendale 2025: The Next Step General Plan*, Presentation Draft. Prepared for the City of Glendale. February 1, 2002.
- Errol L. Montgomery and Associates, 2002. *Response to Comments for Arizona Department of Water Resources Regarding Application for Underground Storage Facility Permit of City of Glendale Aquifer Recharge Facility*. March 25, 2002.
- Greeley and Hansen, 2002. *91<sup>st</sup> Avenue Wastewater Treatment Plant – 25-year Facilities Master Plan. Draft Summary Report*. February 2002.
- Malcolm Pirnie, Inc., 2003. *West Area Water Recycling Master Plan*. City of Glendale West Area Water Reclamation Project. Draft Report. February 2003.
- Malcolm Pirnie, Inc., and Wilson & Company 2002a. *Water Reclamation Facilities Strategic Plan Technical Memorandum*, prepared for the City of Glendale, April 16, 2002.
- Malcolm Pirnie, Inc., 2002b. *West Area Water Reclamation Facility Preliminary Design Report*. City of Glendale West Area Water Reclamation Project. Final Report. December 2002.

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PIRNIE**

**A**



May 28, 2003

Asif Majeed  
Manager Wastewater/Recharge Unit  
Water Permits Section  
**ARIZONA DEPARTMENT OF  
ENVIRONMENTAL QUALITY**  
1110 W. Washington St.  
Phoenix, AZ 85007

Re: Evidence of Financial Capability to Expand and Operate the West Area Water  
Reclamation Facility (WAWRF)

Dear Mr. Majeed:

The City of Glendale has appropriation authority available for construction of an expansion to the WAWRF. The expansion is required to serve a growing population base in the WAWRF service area. Glendale is completing the expansion design and will begin construction in July or August of 2003 and with expected completion in December of 2004. The expansion will be funded through the City's capital improvement project budget. The appropriation should be finalized with a City Council action in July 2003.

Glendale has been operating the existing WAWRF under permits and approvals issued by the Arizona Department of Environmental Quality and Maricopa County since July of 2000. Additional operations costs will be incurred once the expansion is complete. The City of Glendale has funds available for all operations costs at the WAWRF. The funding is available through the City's operations budget.

Closure costs have not been estimated at this time, the WAWRF is expected to serve the City of Glendale in perpetuity. In the event the WAWRF requires closure or decommissioning, the City of Glendale will allocate funds for such activities at that time.

Sincerely,

Arthur R. Lynch  
Chief Financial Officer

cc: Roger Bailey, Utilities Director



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**B**

## SECTION 01043

### COORDINATION WITH OWNER'S OPERATIONS

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. The intent of this Section is to provide CONTRACTOR a sequence to perform the Work in such a manner that continuous, uninterrupted Plant Treatment Processes and all essential Plant services and facilities are maintained operational throughout the construction period.
- B. The sequences of Work and Schedule of Completion are specified under Section 01010, Summary of Work, and Section 01015, Schedule of Completion. The sequences have been assembled to maintain plant operations during construction.
- C. Except for the shutdown durations specified in this Section, CONTRACTOR'S means and methods shall be implemented such that the existing plant or facility, shall remain in continuous satisfactory operation during the entire construction period. Work shall be so scheduled and conducted by CONTRACTOR such that it shall not impede any treatment process, create potential hazards to operating equipment and plant personnel, reduce the quality of the plant effluent or cause odor or other nuisances. In performing the Work shown and specified, CONTRACTOR shall plan and schedule the Work to meet both the constraints outlined in this Section and plant operating requirements.
- D. Work not specifically covered in Section 01010, Summary of Work; and Section 01015, Schedule of Completion or in the following paragraphs may, in general, be done at anytime during normal work hours during the Contract period, subject to the operating requirements outlined in this Section. All references to days in this Section are consecutive calendar days.
- E. CONTRACTOR has the option of providing additional temporary facilities that can eliminate a constraint provided it is done without additional cost to the OWNER, presents no safety hazards, and provided that all requirements of these Specifications are fulfilled.
- F. CONTRACTOR shall be responsible for coordinating all shutdowns with the OWNER and ENGINEER. CONTRACTOR shall, whenever possible, combine discrete shutdown procedures identified in this Section or by CONTRACTOR into a single shutdown when the duration of the shutdowns or the Work requirements allow such combining to occur on a unit process or work area. The intent of combining procedures is to minimize the impacts upon plant operations and processes by limiting the number of shutdowns required.

- G. CONTRACTOR shall not shut-off or disconnect any operating system of the plant, unless approved by the ENGINEER, in writing. All plant equipment operations and shutdowns shall be executed by the OWNER, unless otherwise noted. CONTRACTOR shall seal OWNER operated gates and valves to prevent unnecessary leakage. After CONTRACTOR'S Work has been completed, CONTRACTOR shall remove the seal to the satisfaction of the ENGINEER.
- H. This Section of the Specifications contains several references to equipment, piping, material and appurtenances to be removed or reinstalled. CONTRACTOR shall also refer to the Drawings, Section 02050, Demolitions, and other applicable Sections, for definition of the equipment, piping, material and appurtenances to be removed, turned over to the OWNER and stored on site, or to become the property of CONTRACTOR and removed from the site.
- I. CONTRACTOR shall be responsible for supplying all temporary pipelines, valves, pumps, meters, spare parts, electrical, controls, any other appurtenances, and labor required for the installation and operation of temporary bypass lines, pumping systems, or conveyance systems required to maintain operations of the plant during construction activities. All pumps shall be provided with magnetic flowmeters capable of providing a 4 to 20 mA DC output signal. CONTRACTOR shall man all pumps continuously (24 hours per day) when in service. CONTRACTOR shall submit to the ENGINEER, for information only, the design for all temporary lines, pumping, or conveyance systems at least 30 days prior to the commencement of the Work.
- J. Shutdowns that require reduced or cessation of process air flow to the aeration basins, if excessive, will adversely affect the biological process. This may result in reduced treatment capacity for a period of up to several weeks in order for the process to recover. Therefore, CONTRACTOR shall make every effort to avoid air system shutdowns and, in all cases, complete the Work within the specified shutdown duration. In all cases, shutdowns affecting the air system shall be performed by CONTRACTOR during the lowest flow loading period of the day.
- K. Unless otherwise specified, CONTRACTOR shall dewater process tanks and pipelines at the beginning of each shutdown. CONTRACTOR shall be responsible for washing down and cleaning all tanks, basins, pipelines and other Work areas. It is the responsibility of CONTRACTOR to remove all washdown, cleaning and storm water that accumulates in the Work areas. Approximate depth of sludge, grit and other debris (with a solids concentration of approximately 5 to 20 percent) which can be expected to accumulate in the bottom of basins and pipelines is 18-inches. CONTRACTOR shall be responsible for removing this material and disposing of on site, as directed by the ENGINEER, into one of the treatment processes. Removal of material shall be included as a separate item on CONTRACTOR'S Schedule of Values.

## **1.2 GENERAL CONSTRAINTS**

- A. Article 1.3, below, and Section 01015, Schedule of Completion, specify the sequence and shutdown durations, where applicable, for plant units which are to be taken out of service. The operational status of new or existing units other than the designated units shall not be interrupted by CONTRACTOR during the specified time periods. New units may only be used after the specified testing is completed and the units are accepted for use by the ENGINEER, in writing.
- B. The following constraints shall be applied to all equipment and appurtenant utility systems on the plant site.
1. **Load limits on Access Roads:** Existing and new underground facilities, such as electrical duct banks, pipelines, etc., in, under and crossing plant roads, have been designed for a maximum wheel load of AASHTO H-20. CONTRACTOR shall not exceed this weight limit and shall provide means of protecting the underground facilities.
  2. **Access to Plant Site:** An unobstructed traffic route through all plant gates shall be maintained at all times.
  3. **Safety Barriers:** CONTRACTOR shall place safety barriers around unsafe areas located around operational areas accessible to plant Personnel.
  4. **Personnel Access:** Treatment plant Personnel shall have access to all areas that remain in operation throughout the construction period.
  5. **Potable Water System:** The potable water system shall be kept in operation at all times, unless otherwise specified in Article 1.3, below.
  6. **Plumbing Facilities:** Sanitary facilities in the existing structures shall be operational at all times for plant Operating Personnel, unless otherwise specified in Article 1.5, below. All other building plumbing systems, such as roof and floor drains, pumping, etc., shall be maintained for all structures.
  7. **Storm drainage:** Storm drainage on the site shall be operational at all times, unless otherwise specified in Article 1.3, below.
  8. **Building Heating and Ventilating:** In CONTRACTOR'S Work areas and areas affected by CONTRACTOR'S operations, building heating and ventilating shall be both provided and maintained in structures, including pipe galleries. The temperatures to be maintained in any area occupied by plant Personnel, such as offices, lunchrooms, locker rooms, toilet rooms, facilities containing computer control equipment, etc., shall be at least 65°F and not greater than 80°F. The temperatures to be maintained in all other interior plant areas, whether new, existing or temporary, shall be maintained at a minimum of 55°F and not greater than 90°F.
  9. **Power, Light and Communication Systems:** Electric power, lighting service and communication systems shall be maintained in uninterrupted operation in all areas.
  10. **Sump Pumps and Sumps:** All existing sumps shall be maintained in an operable condition with either existing pumps or temporary pumps provided by CONTRACTOR. Interim piping, power and controls shall be provided by CONTRACTOR, as required by the construction sequence and as directed by the ENGINEER.

11. **Seal and Service Water Piping:** A supply of service and seal water and the necessary connections to existing equipment shall be maintained during construction, unless otherwise specified in Article 1.3, below. Interim piping shall be provided by CONTRACTOR, as required.
12. The OWNER will assist CONTRACTOR in dewatering process tanks, basins and other plant process Work areas. It is CONTRACTOR'S responsibility to maintain a clean and dry Work area by pumping and properly disposing of all washdown and cleaning water and stormwater that accumulates in the Work areas.
13. **Draining Process Pipes and Conduits:**
  - a. Unless otherwise specified, the contents of pipes and conduits undergoing modifications shall be transferred to the plant drain system, upstream of the preliminary treatment facility, or to the Camelback Road Interceptor using hoses, piping, pumps, or other applicable means.
  - b. If a drain is not available on the pipe to be drained, then a wet tap shall be made by CONTRACTOR using a tapping saddle and valve approved by the ENGINEER. No uncontrolled spillage of a pipe's contents shall be allowed.
  - c. Any spillage shall be brought to the ENGINEER'S attention immediately in writing. CONTRACTOR shall wash down any spillage to floor drains, sumps and sump pump discharge piping and then flush out the system to prevent clogging and septic odors. If spillage is not suitable for drainage system, e.g. chemical spills, etc, as determined by the ENGINEER, CONTRACTOR shall remove spillage by other method such as Vactor truck, as approved by the ENGINEER.
14. **Temporary Partitions and Enclosures:** CONTRACTOR shall provide temporary partitions and enclosures necessary to maintain dust-free, heated and ventilated spaces in all areas which are adjacent to their Work and which must be kept operational.
15. **Dead End Valves or Pipe:** CONTRACTOR shall provide blind flanges on all valves or pipes which dead-end a line on a temporary or permanent basis. Blind flanges shall be braced and blocked, as required or as directed by the ENGINEER in the field.
16. CONTRACTOR shall schedule all startups for Monday through Thursday. No startups will be allowed on Friday, Saturday, and Sunday.

### **1.3 SHUTDOWNS**

#### **A. General:**

1. A shutdown shall be defined as a portion of the normal operation of a plant unit or conduit that has to be suspended or taken out of service in order to perform the specified Work. For each shutdown, CONTRACTOR shall compile an inventory of labor and materials required to perform tasks, an estimate of the time required, including time for the OWNER to take down and start-up the plant unit or conduit, and a written description of steps required to complete all tasks. The inventory, the estimate, and written procedures shall be submitted to the ENGINEER for review 45 calendar days prior to the proposed start date of

the shutdown. CONTRACTOR shall also request, in writing from the ENGINEER, approval for each shutdown a minimum of 14 calendar days prior to the proposed shutdown date. No shutdown shall be initiated until the inventory of materials and labor is verified by the ENGINEER on site at least one week prior to the proposed start date.

2. The Work required herein and any other Work required by the ENGINEER which may interrupt the normal plant operations shall be accomplished at such times that will be convenient to the OWNER.
  3. CONTRACTOR shall also have on hand and located in close proximity to the Work area, all tools, equipment, spare parts and materials, both temporary and permanent, necessary to complete each Work category without interruption. Adequate numbers of personnel shall be scheduled for each shutdown, so that the Work shall be accomplished within the specified time frame. Prefabrication of all piping and other assemblies shall be completed, to the greatest degree possible, prior to any shutdowns. The ENGINEER shall be satisfied that CONTRACTOR has complied with these requirements, to the fullest extent possible, before shutdowns will be authorized.
  4. If CONTRACTOR'S procedures cause an unscheduled shutdown of the facilities, CONTRACTOR shall perform Work as necessary to immediately re-establish satisfactory operation. CONTRACTOR shall notify the ENGINEER, in writing, immediately of any unscheduled shutdown. CONTRACTOR shall permit OWNER'S personnel to work with CONTRACTOR'S personnel, as required, to maintain the plant in continuous satisfactory operation. Unscheduled shutdowns or interruptions of continued safe and satisfactory operation of the facilities that result in fines levied by the U.S. Environmental Protection Agency, Arizona Department of Environmental Quality, Maricopa County Health Department Bureau of Air Pollution Control, or the Maricopa County Department of Environmental Management shall be the responsibility of CONTRACTOR if it is demonstrated that CONTRACTOR was negligent in the Work or did not exercise proper precautions in the conduct of the Work.
  5. All Work requiring the plant to be out-of-service shall be performed during the scheduled shutdowns shown. It should be noted plant staff shall continue to perform administrative, operation and maintenance functions during shutdowns.
  6. Electrical Ductbank Installation: Shutdown and relocation of conflicting utilities alignments with electrical ductbank will only be allowed for certain types of process pipelines. Any shutdown and relocations shall follow a strict time schedule in order to minimize impact to plant operations.
- B. Shutdowns of Electrical Systems: CONTRACTOR shall lock out and tag circuit breakers and switches operated by the OWNER and shall check cables and wires to be sure that they are de-energized to ground potential before Work begins. Upon completion of the Work, CONTRACTOR shall remove the locks and tags and notify the ENGINEER that the facilities are available for use.

#### **1.4 OVERTIME**

- A. All overtime Work by CONTRACTOR necessary to conform to the requirements of this Section and related Sections shall be performed by CONTRACTOR, at no additional cost to the OWNER, and shall be performed in accordance with the General Conditions. CONTRACTOR shall make no claims for extra compensation as a result thereof.

#### **1.5 MAINTENANCE OF PLANT OPERATIONS SCHEDULE**

- A. In order to maintain a continuous plant operation during construction, a Maintenance of Plant Operations (MOPOs) Schedule is included at the end of this Section.
- B. Within each MOPO item's procedural steps, time and scheduling constraints and milestone dates may be outlined and are intended to assist CONTRACTOR in developing a sequence of Work and timing in order to maintain continuous operation of the plant.
- C. CONTRACTOR shall develop a detailed description of the complete sequence of construction for all the MOPO events contained herein. The sequences shall be submitted to the ENGINEER for review and approval 30 days following the Notice to Proceed.
- D. The procedures contained herein were developed based upon available information. This list does not address all required tie-ins, but only those anticipated to be of significant impact to plant operations.
- E. CONTRACTOR is required to make all tie-ins, connections, and replacements necessary to perform the Work.
- F. CONTRACTOR is advised that Work in multiple areas of the plant, gravity sewer and force main system shall be performed simultaneously in order to complete the entire scope of the Work within the allotted Contract time.

#### **1.6 SCHEDULES**

- A. Scheduled shutdowns and Constraint Summary is included at the end of this Section.
- B. MOPO Schedule is included at the end of this Section.

#### **PART 2 - PRODUCTS (NOT USED)**

#### **PART 3 - EXECUTION (NOT USED)**

<b>Scheduled Shutdowns and/or Constraints</b>	
<b>Area</b>	<b>Shutdown and/or Constraint</b>
<b>Plant Shutdown</b>	A 14 day shutdown of the Plant (RSPS AND WRF) shall occur on March 1, 2004. All Work requiring a plant shutdown shall occur at this time.
<b>Aeration Basins</b>	Shutdown of Aeration Basins No. 1 or No. 2 must occur after the work in Aeration Basins No. 3 and No. 4 is substantially complete.  Shutdown of Aeration Basins No. 1 or No. 2 cannot occur simultaneously.
<b>Chemical Facilities</b>	Modifications to the Chemical Facilities must be substantially complete prior to the scheduled plant shutdown or must commence 60 days after the plant is in operation after the shutdown is completed.
<b>UV Improvements</b>	All Work must occur between October 15, 2003 and March 31, 2004.
<b>Odor Control Facility</b>	Odor control for the preliminary treatment facilities can be shutdown for no more than 48 consecutive hours.

++ END OF SECTION ++



**MALCOLM  
PIRNIE**

**C**

# WATERS PROJECT

newsletter #1

PHASE 5  
fall 2002

## West Area Water Reclamation Facility Expansion

Glendale's West Area Water Reclamation Facility, located southwest of the city's municipal airport, will more than double its capacity to 10 million gallons per day (mgd). This expansion is needed to assure adequate wastewater treatment capacity for the service area and for the city's growing population. This expansion will not extend beyond the existing facility boundaries, as it was planned for in the initial design.

The city's water comes from several sources. Reclaimed water is the only water supply that continues to grow as population grows. Reclaimed water can be stored underground and used later as a credit that the city can use anywhere in its service area. In this way, reclaimed water helps demonstrate assured water supply. For example, sending it directly to a golf course can also offset use of SRP supplies that can then be used in areas where surface water supplies are less abundant.

Using reclaimed water is not new for Glendale. For example, reclaimed water is used to fill the lakes and irrigate golf courses and green areas within Arrowhead Ranch.



**Aquifer** - A geological formation or layer below the ground surface that stores or carries ground water

**Effluent** - Treated wastewater that flows from a wastewater treatment facility

**Groundwater** - Water located below the ground surface

**MGD** - Million gallons per day refers to the volume of water that flows from a wastewater treatment facility in a 24-hour period

**Reclaimed water** - Domestic wastewater that has been treated to high-quality water and can be used for a new beneficial purpose. Extensive treatment and disinfection ensure that health and environmental concerns are protected.

**Reclamation** - The recovery of useful water from wastewater

**Recharge** - The process of returning water back into a groundwater aquifer

**Reuse** - The recycling of water

**Wastewater** - Used water and solids that flow to a treatment plant through the sewer system

# What is Project WATERS?

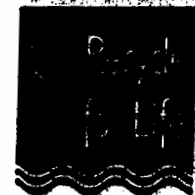
The goal of Project WATERS is to:

- Treat and reclaim wastewater generated within Glendale's city limits.
- Control rate increases associated with increasingly stringent water quality standards.
- Identify new water sources to accommodate Glendale's growing community.
- Meet state requirements to show an assured water supply.

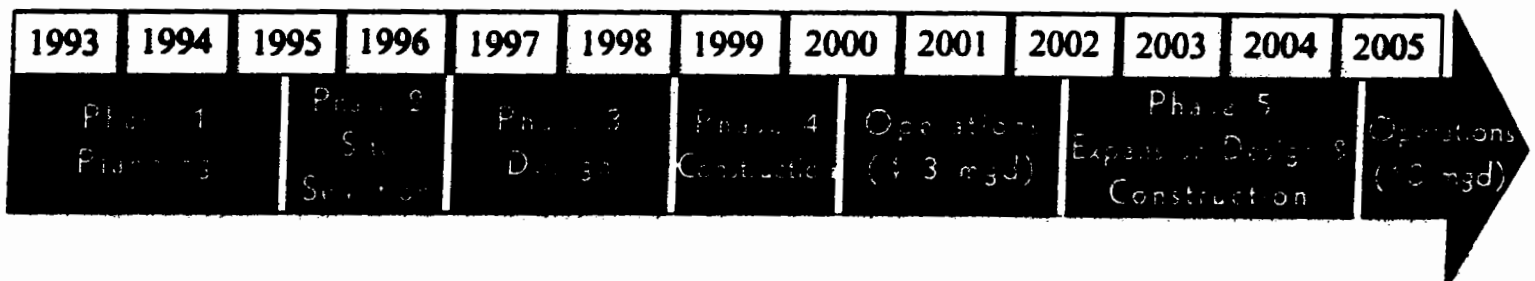
In 1993, Glendale began to reevaluate its wastewater management approach. The city was reaching its maximum capacity at the 91st Avenue Wastewater Treatment Plant. State and federal water quality standards were getting tougher and causing an increase in rates. A 15-member citizen task force was formed to develop and recommend a wastewater disposal plan, which would be publicly acceptable while keeping rates affordable. This effort became Phase 1 of Project WATERS (Wastewater Alternatives to Ease Rate Structures). The task force recommended the construction of a wastewater reclamation facility. The Glendale City Council adopted a wastewater management strategy that included the construction of a 4.3-mgd facility.

The city proceeded immediately with Phase 2 of Project WATERS, a site selection process and extensive public involvement program. Another citizen working group was formed that included representatives from the project area, as well as surrounding communities. This group met monthly over a 10-month period and recommended two sites for the reclamation facility and one for the aquifer recharge facility. Public open houses, newsletters and briefings for the Mayor and Council and for the surrounding communities were held throughout.

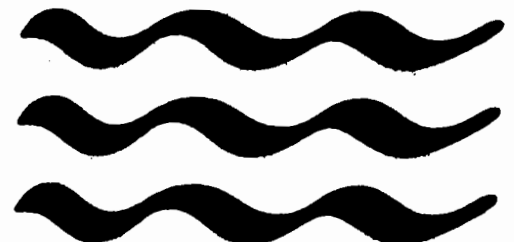
In 1996, the City Council approved the current sites and Phase 3, the facility design, began. In January 1999 Phase 4 started, and the award-winning facility began operating in July 2000. The facility expansion will be designed and constructed over the next two years. Operation is expected to begin in early 2005.



## Project WATERS Timeline



# PROJECT WATERS



## How might the reclaimed water be used?

A Water Recycling Master Plan has been completed to propose a strategy for managing effluent from the water reclamation facility. It is currently being recharged at the existing West Area Aquifer Recharge Facility, which has a maximum long-term capacity of 5.4 mgd.

Nearly 100 potential customers who could reuse the water were identified in the West Area, including parks, golf courses, schools, commercial and business parks, industries and open spaces. The water demands of these potential customers were estimated as well as the costs to serve them. Other options for the effluent were also evaluated. These included new city recharge facilities, participation in a SRP regional recharge facility, exchange of reclaimed water for SRP water supplies and discharge to the Agua Fria and/or New River.

The recommended Water Recycling Master Plan includes four components during this expansion phase:

1. Continue use of the West Area Aquifer Recharge Facility;
2. Potentially participate in the proposed SRP New River-Agua Fria Underground Storage Project;
3. Initially extend reclaimed water service to reuse customers located next to reclaimed water pipelines that were installed during Phase 4, including the Glendale Landfill (for dust control and landscape irrigation) and the proposed Coyotes Arena development (for landscape irrigation); and
4. Provide a river discharge facility.

After the facility has been expanded, during the 2005 to 2008 time period, the city will work to connect other irrigation reuse customers who can easily be served by the new distribution system. These customers may include the Loop 101 Freeway, a wholesale nursery, new Promenade projects planned for Glendale Avenue, the proposed Zanjero Business Center and perhaps the proposed Arizona Cardinals multipurpose facility.

## How will the public be

Newsletters like this one will continue. A community open house is scheduled for December 12, 2002, to show the design and explain the need for the project and its relationship to overall water resource planning. A second open house will be held when the expansion is complete. You may visit our Web site at [www.glendaleaz.com](http://www.glendaleaz.com).



# Community Open House

Thursday, December 12, 2002

West Area Water Reclamation Facility Lobby

5901 N. Glen Harbor Blvd

4 to 6:30 p.m.

Free to all residents of the City of Glendale

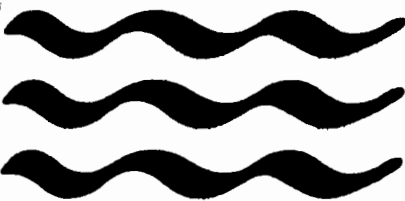
to learn about the project and

Glendale's role in the project

Visit the project website

Call Craig Johnson of Glendale's Engineering Department  
at (623) 930-3630 if you have questions.

Craig Johnson, Project Manager  
City of Glendale Engineering Department  
5850 West Glendale Avenue  
Glendale, Arizona 85301



Tim Francis  
Malcolm Pimie, Inc.  
4646 E. Van Buren, Suite 400  
Phoenix, AZ 85008-6945



**PROJECT  
WATERS** PHASE 5  
newsletter #1 fall 2002

25 0 0 2 + 6 9 4 5



# WATERS PROJECT PHASE 5

newsletter #2 fall 2003

## Construction Begins on West Area Water Reclamation Facility

The City of Glendale is expanding the West Area Water Reclamation Facility, located southwest of the city's municipal airport at 901 N. Glen Harbor Blvd. The expansion is needed to assure adequate wastewater treatment capacity for the service area and for the city's growing population.

Three facilities will be constructed between now and January 2005:

**Water Reclamation Facility.** This expansion was planned in the initial design, so one of the existing buildings will be modified. New covered tanks and filters will be added, and the work will occur below ground, at grade, or within the existing buildings.

At first, a lot of dirt will be excavated and hauled away. Some dirt will be stockpiled on site to back fill around the new structures as construction progresses. Initially, a 100-ton crane will be located at the construction site to position the reinforcing steel for the new structures.

**Raw Sewage Pump Station.** The pump station is northeast of Camelback Road and 19th Avenue. Its purpose is to lift the wastewater that flows through existing pipes along Camelback Road and pump it to the reclamation facility for treatment. Once construction is complete in May 2004, the only change noticed by a passer-by will be a slightly larger generator.

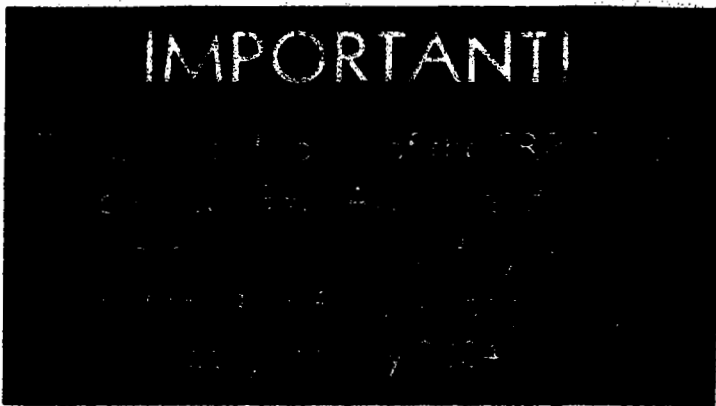
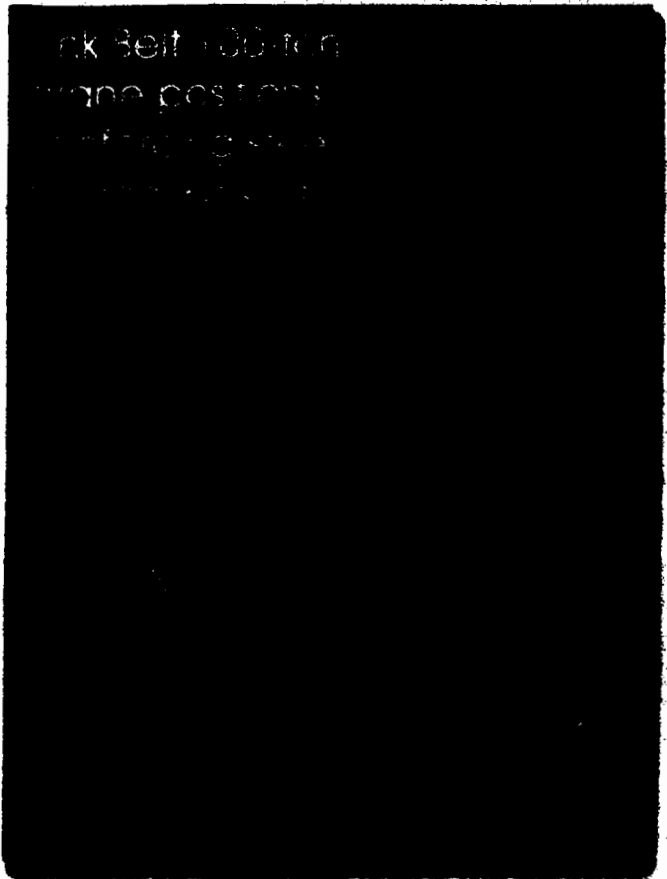
## Airport Lift Station and New Force Main.

The lift station south of the airport conveys solids from the reclamation facility to the 99th Avenue interceptor pipeline. From that point, these solids are transported to the 91st Avenue Wastewater Treatment Plant in Phoenix. The lift station will be modified completely. A new 14-inch force main, or pipe, will be installed along the southern edge of the Bethany Home Road alignment from the airport's eastern boundary to 99th Avenue. The first phase of the construction work for the Airport Lift Station force main will take four to six weeks beginning in early January 2004. During this phase, the dirt road just south of the SRP canal will be closed while the new force main installation is underway.

Thank you for your patience during the installation of the force main pipeline.

Sundt Construction Inc. is the construction manager at risk, and Malcolm Pirnie, Inc. is overseeing the construction on behalf of city.





## For More Information

Call Larry Webb  
with Sundt Construction  
at 623-872-5400  
or Stan Muldrow  
of Glendale's  
Engineering Department  
at 623-930-3630

Russell Fletcher, Project Manager  
City of Glendale Engineering Department  
5850 West Glendale Avenue  
Glendale, Arizona 85301



Tim Francis  
Malcolm Pirnie, Inc.  
4646 E. Van Buren, Suite 400  
Phoenix, AZ 85008-6945



# PROJECT WATERS

newsletter #2

PHASE 5

fall 2003

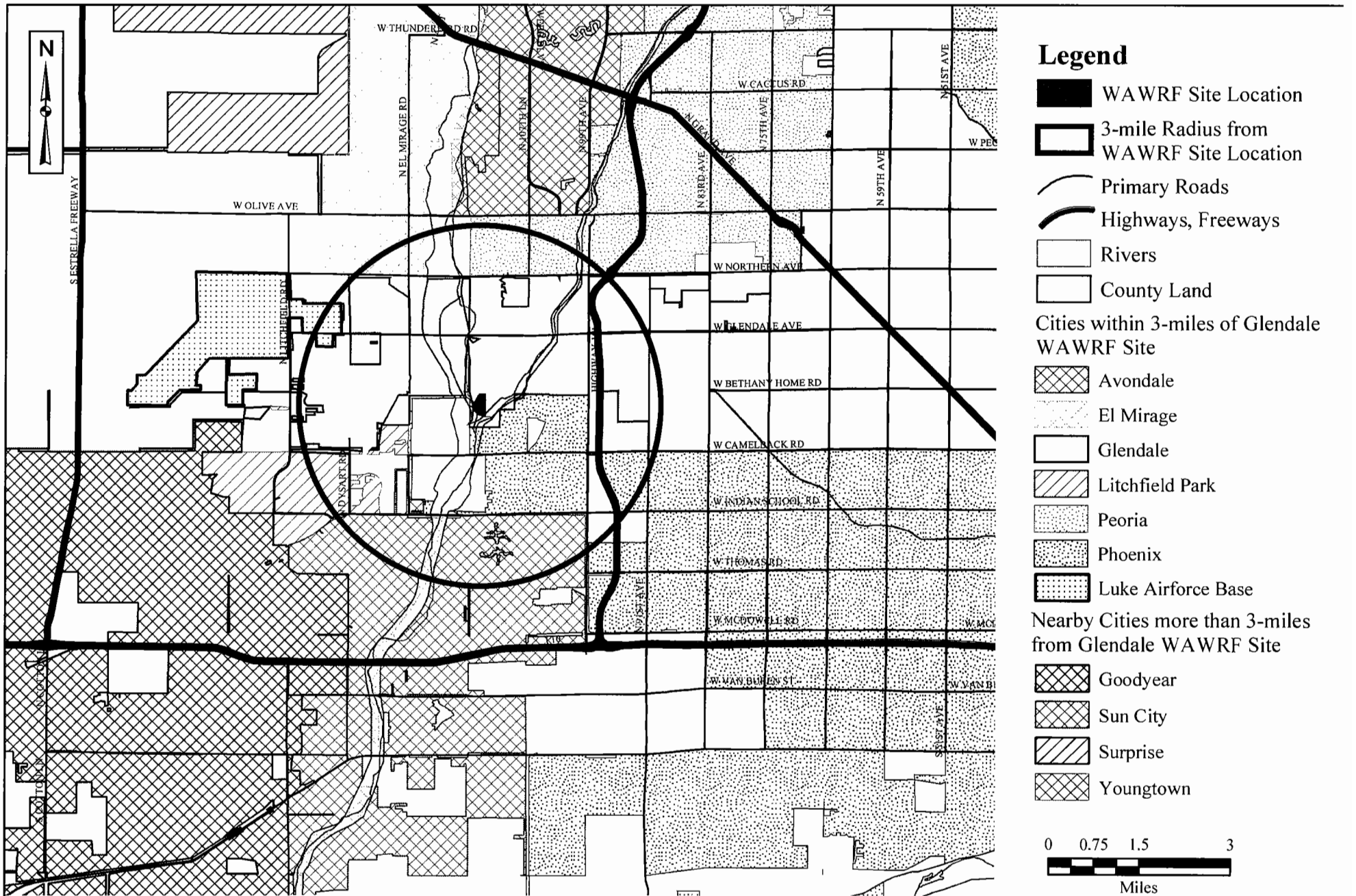
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**MALCOLM  
PIRNIE**

**D**





**MALCOLM  
PIRNIE**

City of Glendale - MAG 208 Amendment  
Cities within 3-mile Radius of City of Glendale WAWRF

JULY 2005

**Figure D1**



Utilities Department  
Wastewater Division  
4800 S. Dysart Road  
Avondale, AZ 85323  
Phone: (623) 478-3430  
Fax: (623) 478-3837  
Website: [www.avondale.org](http://www.avondale.org)

April 4, 2005

Kenneth A. Reedy, P.E.  
Deputy City Manager, Public Works  
City of Glendale  
5850 West Glendale Avenue  
Glendale, AZ 85301

RE: City of Glendale MAG 208 Water Quality Management Plan Amendment, January 2005

Dear Mr. Reedy:

The City of Avondale has reviewed the City of Glendale West Area Water Reclamation Facility Expansion Project, Project No. 012012, dated January 2005 as it pertains to your amendment to the MAG 208 Water Quality Management Plan. The City of Avondale has no objections to the above proposed plan item.

If you have any questions, please feel free to contact me at 623-478-3431 or 623-764-2498.

Sincerely,

A handwritten signature in black ink, appearing to read "Greg Stack", with a stylized flourish at the end.

Greg Stack  
Environmental Services Manager  
City of Avondale Wastewater Division

Cc: File  
David Fitzhugh, P.E., Assistant City Manager  
F.R. "Rob" Emmett, P.E., Utilities Director  
David Gordon, Malcolm Pirnie, Inc.

# City of Litchfield Park

Office of the City Manager

May 31, 2005

Mr. Kenneth A. Reedy, P.E.  
Deputy City Manager  
City of Glendale  
5850 W. Glendale Avenue  
Suite 464  
Glendale, AZ 85301

Re: City of Glendale – MAG 208 Plan Amendment for Western Area Water Reclamation Facility

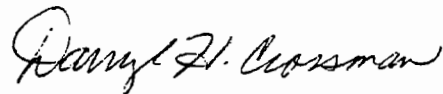
Dear Mr. Reedy:

Please be advised that our City Engineer and I have reviewed your responses to our concerns in reference to the MAG 208 Plan Amendment. Based on our review, the City of Litchfield Park has no objection to the request by the City of Glendale for an amendment to the 208 Water Quality Management Plan for a small package treatment plant.

If you have any further questions, please contact me.

Thank you.

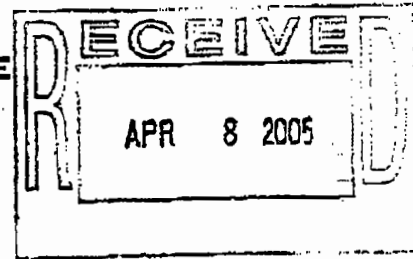
Sincerely yours,



Darryl H. Crossman  
City Manager

cc: Mayor J. Woodfin Thomas  
Members of Council  
Sonny Culbreth, Assistant City Manager  
Susan Goodwin, City Attorney  
Woodrow C. Scoutten, P.E., City Engineer  
✓ Danielle Benkert, Malcolm Pirnie, Inc.

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**DEPARTMENT OF THE AIR FORCE**  
AIR EDUCATION AND TRAINING COMMAND

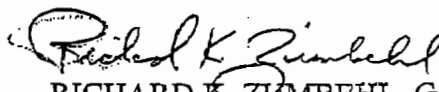
MEMORANDUM FOR Kenneth A. Reedy  
Deputy City Manager, Public Works  
5850 West Glendale Avenue  
Glendale, Arizona 85301

APR 5 2005

FROM: 56 CES/CD  
13970 West Lightning St  
Luke AFB AZ 85309

SUBJECT: Water Quality Management Plan Amendment

After reviewing your proposal for amendment to MAG 208 Water Quality Management Plan, we have no objections to the three projects listed in the proposal. If you have further inquiries, please contact me at 623-856-6136 or at the address above.

  
RICHARD K. ZUMBEHL, GS-14, DAF  
Deputy Base Civil Engineer



## Maricopa County

Environmental Services  
Water and Waste Management Division

001 N. Central Ave., Suite 150  
Phoenix, AZ 85004  
Phone: (602) 506-6666  
Fax: (602) 506-6925  
TDD: 602 506 6704  
www.maricopa.gov/envsvc

April 28, 2005

Maricopa Association of Governments  
302 North 1<sup>st</sup> Avenue, Suite 300  
Phoenix, AZ 85003

Attention: Ms. Lindy Bauer, Environmental Program Coordinator

Re: City of Glendale, West Area Water Reclamation Facility Expansion Project  
**Clean Water Act, MAG 208 Amendment**

Dear Ms. Bauer:

In a letter dated April 21, 2005, Malcolm Pirnie, Inc. submitted a proposed 208 Amendment for expansion of the Glendale, West Area Water Reclamation Facility to Maricopa County Environmental Services Department (Department). The Facility is located at 5901 N. Glen Harbor Blvd., southwest of Glendale Municipal Airport, at the confluence of Agua Fria River and New River, in the City of Glendale.

The document was submitted to the Department because it is located within three miles of unincorporated areas of Maricopa County. The facility is also located within three miles of the City of Peoria, City of Phoenix, City of Avondale, and City of Litchfield Park.

Based on a review of the proposed 208 Small Plant Submittal, dated April 21, 2005, the Department has determined that the proposed plant is acceptable and complies with the Small Plant Review and Approval Process under the MAG 208 Areawide Water Quality Management Plan. The proposed plant expansion is not in conflict with Maricopa County plans for the area.

Please note that the Department has not reviewed, nor approved, the design of the facilities as part of the 208 review. Any technical issues that remain will need to be resolved during the design phase of the project. Approval to Construct (ATC) and Approval of Construction (AOC) must be obtained from this Department prior to start of construction and startup, respectively, of all treatment, discharge, recharge, and reuse facilities, including all conveyance facilities and final end user facilities.

If you have any questions or comments, please feel free to contact Mr. Kenneth James, PE, or myself at 506-6666.

Sincerely,

*Kenneth R. James FOR*

Dale Bodiya, P.E.  
Acting Manager, Water and Waste Management Division

cc: Kenneth Reedy, PE, City of Glendale, 5850 W. Glendale Ave., Glendale, AZ 85301  
David Gordon, RG, Malcolm Pirnie, Inc., One South Church Ave., Suite 1120,  
Tucson, AZ 85701-1654  
File

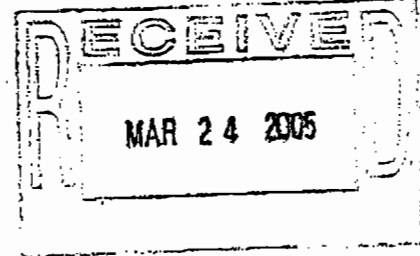


## City of Peoria

### City Manager's Office

8401 West Monroe Street, Peoria, Arizona 85345

Phone: 623-773-7300 Fax: 623-773-7309



March 21, 2005

Ken A. Reedy, P.E.  
Deputy City Manager, Public Works  
City of Glendale, Municipal Complex  
5850 W. Glendale Avenue  
Glendale, AZ 85301-2599

Re: MAG 208 Water Quality Management Plan Amendment  
City of Glendale

Dear <sup>Ken</sup>Mr. Reedy,

The City of Peoria has reviewed the City of Glendale's proposed amendment to the MAG 208 Water Quality Management Plan for the expansion of the Glendale West Area Water Reclamation Facility, Project 012012.

The City of Peoria has no objection to the proposed item listed above.

Sincerely,

A handwritten signature in cursive script, reading "Terry Ellis".  
Terry Ellis  
City Manager

cc: Meredith Flinn, Deputy City Manager  
Stephen L. Bontrager, Utilities Director



**City of Phoenix**  
Water Services Department  
Compliance & Regulatory Affairs Office

May 25, 2005

Mr. Kenneth A. Reedy, P.E.  
Deputy City Manager, Public Works  
City of Glendale, Municipal Complex  
5850 West Glendale Avenue  
Glendale, Arizona 85301-2599

Dear Mr. Reedy:

Re: MAG 208 Water Quality Management Plan Amendment

This is in response to your letter dated January 7, 2005, regarding a MAG 208 Water Quality Management Plan Amendment for Expansion of the Glendale West Area Water Reclamation Facility. The City of Phoenix has reviewed the Clean Water Act MAG 208 Amendment dated January 2005 and has no objection to this project.

Sincerely,

Robert A. Hollander, P.E.  
Compliance and Regulatory Affairs Administrator

c: David Gordon – Malcolm Pirnie  
Norris Nordvold  
Danny Murphy  
Carlos Padilla  
Paul Kinshella

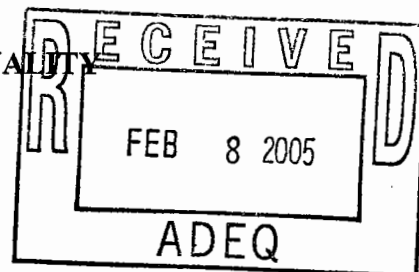
**MALCOLM  
PIRNIE**

**E**



February 8, 2005

Mr. Manuel Padilla  
Surface Water Permits Unit  
**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
1110 West Washington Street  
Phoenix, Arizona 85007



Re: Response to Comments  
AZPDES Permit Application  
City of Glendale West Area Water Reclamation Facility (WAWRF)

Dear Mr. Padilla:

This letter is submitted in response to your comments during phone conversations with Thomas Bolyen (City of Glendale) and Marla Miller (Malcolm Pirnie) regarding the AZPDES Permit Application for the West Area Water Reclamation Facility (WAWRF). For ease of reference, we have restated each comment (C) with our response (R).

- 1C. Form 2A: page 1-5, A.11.b Description of Treatment – Please indicate removal rates, as applicable, for the following parameters: Design BOD<sub>5</sub>, Design SS removal, and Design N removal.
- 1R. Please see the revised page 1-5 attached to this letter.
- 2C. Failure to complete the Regional Water Quality Management Planning required of Section 208 of the federal Clean Water Act.
- 2R. A completed draft MAG 208 Amendment was submitted to Ken Reedy (City of Glendale) for distribution to the cities located within a three-mile radius of WAWRF during the week of January 3, 2005. The City of Glendale is awaiting the receipt of Letters of No Objection from those cities. Upon receipt of all letters, the MAG 208 Amendment will proceed to the next phase of the amendment process in which the MAG Water Quality Advisory Committee will review the draft and authorize a public hearing. The draft MAG 208 Amendment is anticipated to be approved by the MAG Regional Council by May 2005.



Mr. Manuel Padilla  
ADEQ

February 8, 2005  
Page 2

Please contact me at (602) 797-4621, if you have any additional questions or comments.

Sincerely,  
**MALCOLM PIRNIE, INC.**

A handwritten signature in dark ink that reads 'Dad A. Gordon'.

David A. Gordon, R.G.  
Project Manager

**Attachments**

cc: Russell Fletcher, City of Glendale  
Doug Kukino, City of Glendale  
Roger Bailey, City of Glendale  
Craig Johnson, City of Glendale  
Ed Martin, Malcolm Pirnie

**WASTEWATER DISCHARGES**

Complete items A.9 through A.12 once for each outfall (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section.

**A.9. Description of Outfall.**

- a. Outfall number 001
- b. Location New River  
City or town Glendale County Maricopa  
State Arizona Zip code 85303  
Latitude 33 ° 31 ' 21.74 " N Longitude 112 ° 17 ' 24.75 " W
- c. Distance from shore, if applicable N/A ft.
- d. Depth below surface, if applicable N/A ft.
- e. Average daily flow rate 11.5 mgd (Max. sustained flow expected, typically much less or zero.)
- f. Is discharge from this outfall continuous or x Intermittent or periodic?  
If intermittent or periodic, provide the following information:  
Number of times per year discharge occurs As required Average duration of each discharge As required  
Average flow per discharge 0-11.5 mgd Months in which discharge occurs As required
- g. Is outfall equipped with a diffuser? Yes x No

**A.10. Description of Receiving Waters.**

- a. Name of receiving waters New River
- b. Name of watershed, if known Agua Fria Watershed  
U.S. Natural Resources Conservation Service 14 digit watershed code, if known Unknown
- c. Name of River Basin, if known Gila/Colorado
- d. United States Geological Survey 8 digit hydrologic cataloging unit code, if known 15070102
- e. Critical low flow of receiving stream, if applicable. acute N/A cfs chronic N/A cfs
- f. Total hardness of receiving stream at critical low flow, if applicable. N/A mg/l of CaCO<sub>3</sub>

**A.11. Description of Treatment.**

- a. What levels of treatment are provided? Check all that apply.  
Primary Secondary x Advanced (with filtration)  
Other (Describe) \_\_\_\_\_
- b. Indicate the following removal rates, as applicable:
- |   |                              |   |
|---|------------------------------|---|
| Design BOD <sub>5</sub> removal or design CBOD <sub>5</sub> removal | <u>85% (BOD<sub>5</sub>)</u> | % |
| Design SS removal   | <u>85%</u>                   | % |
| Design P removal  | <u>N/A</u>                   | % |
| Design N removal  | <u>74%</u>                   | % |
| Other _____   | _____                        | % |



Janet Napolitano  
Governor

# ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007  
(602) 771-2300 • [www.azdeq.gov](http://www.azdeq.gov)



Stephen A. Owens  
Director

March 9, 2005

Mr. Larry Brotman  
Superintendent of Wastewater Operations  
City of Glendale  
5901 N. Glen Harbor Boulevard  
Glendale, Arizona 85307

**Re: City of Glendale – West Area Water Reclamation Facility (WRF)  
Signed Permit - Aquifer Protection Permit (APP) No # 103580**

Dear Mr. Brotman:

Enclosed is the signed Aquifer Protection Permit (APP) # 100644 amendment and the Fact Sheet for the above referenced facility. The permit conditions shall apply from March 9, 2005, which is the date of the Water Quality Division Director's signature, and shall be valid for the life of the facility. Thank you for your cooperation in protecting the water quality of the State of Arizona.

If you have any questions about the permit or need further assistance, please contact me at (800) 234-5677 ext. 771-4683 or (602) 771-4683 or at [akm@azdeq.gov](mailto:akm@azdeq.gov) by email.

Sincerely,

Asif Majeed, Manager  
Wastewater, Recharge, & Reuse Unit  
Water Permits Section, Water Quality Division

Attachments(2): Signed Permit and Fact Sheet

c: Jean Black, Hydrologist, Wastewater, Recharge, & Reuse Unit (letter only)  
Diane Reed, ADEQ Biosolids Coordinator  
Lynne Dekarske, Water Permits Section  
Don Shroyer, Water Quality Compliance  
David Gordon, Malcolm Pirnie

WRR05:0191

Northern Regional Office  
1515 East Cedar Avenue • Suite F • Flagstaff, AZ 86004  
(928) 779-0313

Southern Regional Office  
400 West Congress Street • Suite 433 • Tucson, AZ 85701  
(520) 628-6733



# FACT SHEET

Significant Amendment To Aquifer Protection Permit # 103580

LTF # 29811, Place ID # 5079

Glendale West Area Water Reclamation Facility

The Arizona Department of Environmental Quality (ADEQ) proposes to issue an aquifer protection permit for the subject facility that covers the life of the facility, including operational, closure, and post-closure periods unless suspended or revoked pursuant to Arizona Administrative Code (A.A.C.) R18-9-A213. This document gives pertinent information concerning the issuance of the permit. The requirements contained in this permit will allow the permittee to comply with the two key requirements of the Aquifer Protection Program: 1) meet Aquifer Water Quality Standards at the Point of Compliance; and 2) demonstrate Best Available Demonstrated Control Technology (BADCT). BADCT's purpose is to employ engineering controls, processes, operating methods or other alternatives, including site-specific characteristics (i.e., the local subsurface geology), to reduce discharge of pollutants to the greatest degree achievable before they reach the aquifer or to prevent pollutants from reaching the aquifer.

## I. FACILITY INFORMATION

### Name and Location

Permittee's Name:	Glendale, City of
Mailing Address:	West Area Water Reclamation Facility 5901 N. Glen Harbor Blvd. Glendale, AZ 85307
Facility name and location:	West Area Water Reclamation Facility 5901 N. Glen Harbor Blvd. Glendale, Arizona 85307

### Regulatory Status

This is currently a permitted facility. The facility was issued a permit on February 16, 1999. A minor amendment to correct the limits for chromium was issued on October 18, 2001. An significant amendment to increase the flow from 4.3 million gallons per day (MGD) to 7.0 MGD was issued on August 15, 2002. The current significant amendment application to increase the flow from 7.0 MGD to 11.5 MGD was received on May 2, 2003. Under this amendment, effluent disposal will be to the currently permitted West Area Aquifer Recharge Facility (ARF) site (APP # 103611), as well as to the New River Agua Fria Underground Storage Project (NAUSP) to be permitted under APP # 104579, and reuse sites permitted under a reclaimed water permit.

There are no compliance actions pending for this facility.

### **Facility Description**

The permittee is authorized to operate a 11.5 MGD activated sludge Water Reclamation Facility (WRF). The treatment process consists of bar screens, grit removal, aeration, denitrification, clarification, coagulation, flocculation, filtration, ultra violet (UV) disinfection and additional disinfection using chlorine/de-chlorination, provided in the two discharge lines, one leading to the ARF site, and the other to the NAUSP site.

The effluent may be disposed of by either reuse or recharged. The raw sewage may also be routed to Phoenix 91st Avenue Wastewater Treatment Plant (WWTP) for disposal in case of an emergency. The sludge is transferred via a sewer pipeline to the Phoenix 91st Avenue WWTP for treatment and disposal. The effluent shall be monitored for certain constituents of the Aquifer Water Quality Standards including all nitrogen forms at the point of discharge from the effluent pump station. The Glendale WRF will be designed, constructed, and located according to the design report approved by ADEQ Wastewater, Recharge and Reuse Unit of the Water Permits Section.

The permittee may request an "other" amendment to discharge to the New River under a AZPDES permit, upon receiving an approval of the Maricopa Association of Governments 208 Water Quality Management Plan (MAG 208) amendment. The point of compliance (POC) for this discharge location will be designated at latitude 33°31'22"N and longitude 111°51'22" W which is about 1300 feet west of the New River outfall. The total flow to the New River outfall shall not exceed 345 million gallons (MG) per year (11.5 MGDx30 days) in any calendar year. Also whenever the facility discharges under this option, daily discharge monitoring will be required for nitrogen (all forms) and fecal coliform, unless a well is installed at the POC. If discharge flow limit exceeds the 345 MG per year, the facility shall request another permit amendment, within 30 days of such an exceedance to install a well at the POC.

Specific discharge limitations are specified in Section 4.0, TABLE I.

The WWTP is classified as generating A+ reclaimed water.

The WRF is located near the confluence of the Agua Fria River and New River. The surface and subsurface materials in this area were deposited by these two rivers and consist of unconsolidated sand, gravel, cobbles and silt with occasional layers of clay.

In addition to the APP conditions pertaining to treatment and disposal of sewage sludge, the permittee must also comply with the requirements for any sewage sludge disposal in 40 Code of Federal Regulations (C.F.R) Part 503 and 18A.A.C.9, Article 10.

### **Amendment Description**

The permit is being amended to increase the flow from 7.0 MGD to 11.5 MGD. In addition the facility is adding an additional discharge point, which is to the recharge site to be permitted under APP # 105479.

Section 2.1. Add language stating that the facility may use chlorination/dechlorination to augment the UV disinfection system. Also add language specifying additional discharge points, as stated above.

Section 4.0. Add Table I. Change Flow limits from 7.0 to 11.5 MGD. Revise the format of this table for better readability, and to track flows to different disposal sites.

## **II. BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY (BADCT)**

The wastewater treatment plant is designed to produce A+ reclaimed water quality effluent. This is done using an extended aeration process consisting of nitrification, denitrification, filtration and disinfection. The treatment plant meets the new facility BADCT as per A.A.C. R18-9-B204 (A).

All Industrial hookups and other non-residential hookups to the treatment system shall conform to Section 307 of the Federal Water Pollution Control Act and shall be authorized according to the federal pretreatment program, or as otherwise approved by federal, state or local regulations.

## **III. COMPLIANCE WITH AQUIFER WATER QUALITY STANDARDS**

### **Monitoring and Reporting Requirements**

The facility will produce denitrified and tertiary treated effluent that meets the requirement of Class A + reclaimed water. Effluent monitoring is required for flow, metals, all nitrogen forms, fecal coliform, Volatile Organic Compounds,(VOCs) and radionuclides at the effluent wet well. In addition, the permittee shall monitor for THMs at a two sampling points located in the discharge piping downstream of the wet well and effluent pump station.

The depth to groundwater is approximately 160 feet below ground surface (bgs) and the direction of groundwater flow is believed to be towards the west. Because of these considerations the facility is expected to be in compliance with the AWQS at the point of compliance. No groundwater monitoring is required at the facility, as almost all the discharge is regulated under another APP or reuse permit.

### **Point(s) of Compliance:**

<b>POC #</b>	<b>Descriptive Location</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Monitoring Proposed</b>
1	350 feet west from the NW corner of WRF	33°31'14" N	112°18' 11" W	No monitoring well required at permit issuance

A groundwater monitoring well is not required at the POC, at the time of permit issuance. Groundwater monitoring may be required if the discharge limits are exceeded in Table IC.

#### **IV. STORM WATER and SURFACE WATER CONSIDERATIONS**

The WRF is outside the 100 year flood plain and therefore will not be impacted by a 100 year flood event.

#### **V. COMPLIANCE SCHEDULE**

Not required

#### **VI. OTHER REQUIREMENTS FOR ISSUING THIS PERMIT**

##### **Technical Capability**

The City of Glendale has demonstrated the technical competence necessary to carry out the terms and conditions of the permit in accordance with A.R.S. § 49-243(N) and A.A.C. R18-9-A202(B). The WRF has been designed by Malcolm Pirnie, a firm that has designed several such plants in the past. The City of Glendale will operate the plant using certified operators. The permit requires that appropriate documents be sealed by an Arizona registered geologist or professional engineer. This requirement is a part of an on-going demonstration of technical capability. The permittee is expected to maintain technical capability throughout the life of the facility.

##### **Financial Capability**

The City of Glendale has demonstrated the financial responsibility necessary to carry out the terms and conditions of the permit in accordance with A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The permittee is expected to maintain financial capability throughout the life of the facility.

##### **Zoning Requirements**

West Area WRF has been properly zoned for the permitted use and the permittee has complied with all City of Glendale zoning ordinances in accordance with A.R.S. § 49-243(O) and A.A.C. R18-9-A201(A)(2)(c).

#### **VII. ADMINISTRATIVE INFORMATION**

##### **Public Notice (A.A.C. R18-9-108(A))**

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft permit or other significant action with respect to a permit or application. The basic intent of this requirement is to ensure that all interested parties have an opportunity to comment on significant actions of the permitting agency with respect to a permit application or permit. This permit will be public noticed in a local newspaper after a pre-notice review by the applicant and other affected agencies.

##### **Public Comment Period (A.A.C. R18-9-109(A))**

The aquifer protection program rules require that permits be public noticed in a newspaper of general circulation within the area affected by the facility or activity and provide a minimum



of 30 calendar days for interested parties to respond in writing to ADEQ. After the closing of the public comment period, ADEQ is required to respond to all significant comments at the time a final permit decision is reached or at the same time a final permit is actually issued.

**Public Hearing (A.A.C R18-9-109(B))**

A public hearing may be requested in writing by any interested party. The request should state the nature of the issues proposed to be raised during the hearing. A public hearing will be held if the Director determines there is a significant amount of interest expressed during the 30-day public comment period, or if significant new issues arise that were not considered during the permitting process.

**VIII. ADDITIONAL INFORMATION**

Additional information relating to this proposed permit may be obtained from:

Arizona Department of Environmental Quality

Water Quality Division – Wastewater, Recharge and Reuse Unit

Attn: Asif Majeed

1110 W. Washington St., Mail Code 5415B-3

Phoenix, Arizona 85007

Phone: (602) 771- 4683

**STATE OF ARIZONA**  
**AQUIFER PROTECTION PERMIT NO. P-103580**  
**PLACE ID 5079, LTF 29811**  
**SIGNIFICANT AMENDMENT**

**1.0 AUTHORIZATION**

In compliance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 2, Articles 1, 2 and 3, Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Articles 1 and 2, A.A.C. Title 18, Chapter 11, Article 4 and amendments thereto, and the conditions set forth in this permit, the City of Glendale is hereby authorized to operate the West Area Water Reclamation Facility, located in the City of Glendale, Maricopa County, over groundwater of the Phoenix Active Management Area in Township 2 N, Range 1E, Section 18 of the Gila and Salt River Base Line and Meridian.

This permit becomes effective on the date of the Water Quality Division Director's signature and shall be valid for the life of the facility (operational, closure, and post-closure periods) unless suspended or revoked pursuant to A.A.C. R18-9-A213. The permittee shall construct, operate and maintain the permitted facilities:

1. Following all the conditions of this permit including the design and operational information documented or referenced below, and
2. such that Aquifer Water Quality Standards (AWQS) are not violated at the applicable point(s) of compliance (POC) set forth below or if an AWQS for a pollutant has been exceeded in an aquifer at the time of permit issuance, that no additional degradation of the aquifer relative to that pollutant and as determined at the applicable POC occurs as a result of the discharge from the facility.

**1.1 PERMITTEE INFORMATION**

<b>Facility Name:</b>	City of Glendale – West Area Water Reclamation Facility	
<b>Permittee:</b>	<b>Mailing Address:</b>	<b>Facility's Street Address:</b>
City of Glendale	5901 N. Glen Harbor Blvd Glendale, AZ 85307	5901 N. Glen Harbor Blvd. Glendale, AZ 85307

**Facility Contact:** Larry Brotman, Superintendent of Wastewater Operations

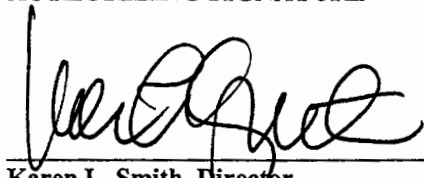
**Emergency Telephone Number:** (623) 930-4751

**Latitude:** 33° 31' 06" N

**Longitude:** 112° 18' 11" W

**Legal Description:** Township 2 N, Range 1E, Section 18 of the Gila and Salt River Base Line and Meridian.

**1.2 AUTHORIZING SIGNATURE**



**Karen L. Smith, Director**

Water Quality Division

Arizona Department of Environmental Quality

Signed this 9th day of MARCH, 2005

**THIS PERMIT SUPERCEDES ALL PREVIOUS PERMITS**

**2.0 SPECIFIC CONDITIONS [A.R.S. §§ 49-203(4), 49-241(A)]**

**2.1 Facility / Site Description [A.R.S. § 49-243(K)(8)]**

The permittee is authorized to operate a 11.5 million gallon per day (mgd) activated sludge Water Reclamation Facility (WRF). The treatment process consists of bar screens, grit removal, aeration, de-nitrification, clarification, coagulation, flocculation, filtration and ultra violet (UV) disinfection and additional disinfection using chlorine/de-chlorination for the purpose preventing re-growth in the effluent lines discharging to the two recharge sites. The effluent may be disposed of by either reuse under a valid reuse permit or recharged pursuant to Aquifer Protection Permits # 103611 and 105479. The raw sewage may also be routed to Phoenix 91st Avenue Wastewater Treatment Plant (WWTP) for disposal in case of an emergency. The sludge is transferred via a sewer pipeline to the Phoenix 91st Avenue WWTP for treatment and disposal. The effluent shall be monitored for certain constituents of the Aquifer Water Quality Standards including all nitrogen forms at the effluent wet well. The Glendale WRF will be designed, constructed, and located according to the design report approved by ADEQ Wastewater, Recharge and Reuse Unit of the Water Permits Section.

The permittee may request an "other" amendment to discharge to the New River under an AZPDES permit, upon receiving an approval of the Maricopa Association of Government's 208 Water Quality Management Plan (MAG 208) amendment. The point of compliance (POC) for this discharge location will be designated at latitude 33°31'22"N and longitude 112°18'11" W which is about 1300 feet west of the New River outfall. The total flow to the New River outfall shall not exceed 345 million gallons (MG) per year (11.5 MGDx30 days) in any calendar year. Also whenever the facility discharges under this option, daily discharge monitoring will be required for nitrogen (all forms) and fecal coliform, unless a monitoring well is installed at the POC. If discharge flow limit exceeds the 345 MG per year, the facility shall request another permit amendment, within 30 days of such an exceedance to install a well at the POC.

The WWTP is classified as generating A+ reclaimed water.

Specific discharge limitations are specified in Section 4.0, TABLE I.

The site includes the following permitted discharging facilities:

Facility	Latitude	Longitude
Center of WRF	33° 31' 06" N	112°18'11" W

**2.2 Best Available Demonstrated Control Technology  
[A.R.S. § 49-243(B) and A.A.C. R18-9-A202(A)(5)]**

The Water Reclamation Facility is designed to meet the treatment performance criteria for new facilities as specified in Arizona Administrative Code R18-9-B204.

The facility meets the requirement for pretreatment as per A.A.C. R18-9-B204(A)(6)(b)(ii).

**2.2.1 Engineering Design**

The WRF was designed as per the design report prepared by Malcolm Pirnie dated December 2002.

**2.2.2 Site-specific Characteristics**

Not Applicable.

**2.2.3 Pre-Operational Requirements**

Within 60 days of the completion of construction, the operator shall inspect the facility to verify that all components function as designed. The permittee shall provide written certification within 90 days following final completion of the construction to the ADEQ Water Quality Compliance Section, that inspection of all components was performed. The results of inspection should also be indicated.

**2.2.4 Operational Requirements**

1. The permittee shall maintain a copy of the new O & M manual at the WWTP site at all times and shall be available upon request during inspections by ADEQ personnel.
2. The pollution control structures shall be inspected for the items listed in Section 4.0, TABLE III - FACILITY INSPECTION (OPERATIONAL MONITORING).
3. If any damage of the pollution control structures is identified during inspection, proper repair procedures shall be performed. All repair procedures and material(s) used shall be documented on the Self-Monitoring Report Form submitted quarterly to the ADEQ Water Quality Compliance Section.

**2.2.5 Wastewater Treatment Plant Classification**

**A.A.C. R18-9-703(C)(2)(a), A.A.C. R18-11-303 THROUGH 307]**

The WRF will produce reclaimed water meeting Class A+ Reclaimed Water Quality Standards (A.A.C. R18-11, article 3) and can be used for any allowable use in that class under a valid reclaimed water permit.

**2.3 Discharge Limitations [A.R.S. §§ 49-201(14), 49-243 and A.A.C. R18-9-A205(B)]**

1. The permittee is authorized to operate the WRF with a maximum average monthly flow of 11.5 MGD.
2. The permittee shall notify all users that the materials authorized to be disposed of through the WRF are typical household sewage and shall not include motor oil, gasoline, paints, varnishes, hazardous wastes, solvents, pesticides, fertilizers or other materials not generally associated with toilet flushing, food preparation, laundry facilities and personal hygiene.
3. Specific discharge limitations are listed in Section 4.0, Tables IA, IB and IC.

**2.4 Points of Compliance (P.O.C.) [A.R.S. § 49-244]**

The Points of Compliance are established by the following designated locations:

<b>P.O.C #</b>	<b>P.O.C. Locations</b>	<b>Latitude</b>	<b>Longitude</b>
1	POC for pollutant management area (PMA) around the WRF: located ~350' west of northwest corner of the property.	33°31'14" N	112°18'11" W

Groundwater monitoring is not required at the point of compliance except as a contingency action.

The Director may amend this permit to designate additional points of compliance if information on groundwater gradients or groundwater usage indicates the need.

## **2.5 Monitoring Requirements [A.R.S. § 49-243(K)(1), A.A.C. R18-9-A206(A)]**

All monitoring required in this permit shall continue for the duration of the permit, regardless of the status of the facility. All sampling, preservation and holding times shall be in accordance with currently accepted standards of professional practice. Trip blanks, equipment blanks and duplicate samples shall also be obtained, and chain of custody procedures shall be followed, in accordance with currently accepted standards of professional practice. The permittee shall consult the most recent version of the ADEQ Quality Assurance Project Plan (QAPP) and EPA 40 CFR PART 136 for guidance in this regard. Copies of laboratory analyses and chain of custody forms shall be maintained at the permitted facility. Upon request these documents shall be made immediately available for review by ADEQ personnel.

### **2.5.1 Discharge Monitoring**

The permittee shall monitor the wastewater according to Section 4.0, TABLE IA, and IB. A representative sample of the wastewater shall be collected at the effluent wet well. Additional monitoring for THM shall be conducted as per Table 1C, after de-chlorination, in the discharge piping downstream of the wet well and effluent pump station.

#### **2.5.1.1 Reclaimed Water Monitoring**

The permittee shall monitor the parameters listed under Table 1B in addition to the routine discharge monitoring parameters listed in Table 1A, and 1C.

### **2.5.2 Facility / Operational Monitoring**

Operational monitoring inspections shall be conducted according to Section 4.0, TABLE III.

- a. If any damage of the pollution control structures is identified during inspection, proper repair procedures shall be performed. All repair procedures and materials used shall be documented on the Self-Monitoring Report Form (SMRF) submitted quarterly to the ADEQ Water Quality Compliance Section. If none of the conditions occur, the report shall say "no event" for a particular reporting period. If the facility is not in operation, the permittee shall indicate that fact in the SMRF.
- b. The permittee shall submit data required in Section 4.0, TABLE III regardless of the operating status of the facility unless otherwise approved by the Department or allowed in this permit.

### **2.5.3 Groundwater Monitoring and Sampling Protocols**

Routine groundwater monitoring is not required under the terms of this permit.

### **2.5.4 Surface Water Monitoring and Sampling Protocols**

Routine surface water monitoring is not required under the terms of this permit.

### **2.5.5 Analytical Methodology**

All samples collected for compliance monitoring shall be analyzed using Arizona state approved methods. If no state approved method exists, then any appropriate EPA approved method shall be used. Regardless of the method used, the detection limits must be sufficient to determine compliance with the regulatory limits of the parameters specified in this permit. Analyses shall be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods. A list of Arizona State certified laboratories can be obtained at the address below:

Arizona Department of Health Services  
Office of Laboratory Licensure and Certification  
1740 W. Adams Street, Room 203 North  
Phoenix, AZ 85007  
Phone: (602) 364-0720

#### **2.5.6 Installation and Maintenance of Monitoring Equipment**

Monitoring equipment required by this permit shall be installed and maintained so that representative samples required by the permit can be collected. If new groundwater wells are determined to be necessary, the construction details shall be submitted to the ADEQ Water Permits Section for approval prior to installation and the permit shall be amended to include any new points.

### **2.6 Contingency Plan Requirements**

[A.R.S. § 49-243(K)(3), (K)(7) and A.A.C. R18-9-A204 and R18-9-A205]

#### **2.6.1 General Contingency Plan Requirements**

At least one copy of the approved contingency and emergency response plan(s) submitted in the application shall be maintained at the location where day-to-day decisions regarding the operation of the facility are made. The permittee shall be aware of and follow the contingency and emergency plans.

Any alert level (AL) that is exceeded or any violation of an aquifer quality limit (AQL), discharge limit (DL), or other permit condition shall be reported to ADEQ following the reporting requirements in Section 2.7.3.

Some contingency actions involve verification sampling. Verification sampling shall consist of the first follow-up sample collected from a location that previously indicated a violation or the exceedance of an AL. Collection and analysis of the verification sample shall use the same protocols and test methods to analyze for the pollutant or pollutants that exceeded an AL or violated an AQL. The permittee is subject to enforcement action for the failure to comply with any contingency actions in this permit. Where verification sampling is specified in this permit, it is the option of the permittee to perform such sampling. If verification sampling is not conducted within the timeframe allotted, ADEQ and the permittee shall presume the initial sampling result to be confirmed as if verification sampling has been conducted. The permittee is responsible for compliance with contingency plans relating to the exceedance of an AL or violation of a DL, AQL or any other permit condition.

#### **2.6.2 Exceeding of Alert Levels/Performance Levels**

##### **2.6.2.1 Exceeding of Performance Levels (PL) Set for Operational Conditions**

1. If the operational PL set in Section 4.0, TABLE III has been exceeded (permit condition violated) the permittee shall:
  - a. Notify the ADEQ Water Quality Compliance Section within five (5) days of becoming aware of a violation of any permit condition.
  - b. Submit a written report within thirty (30) days after becoming aware of a violation of a permit condition. The report shall document all of the following:
    1. A description of the violation and its cause;
    2. the period of violation, including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue;
    3. any action taken or planned to mitigate the effects or the violation, or the spill, or to eliminate or prevent recurrence of the violation;
    4. any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an Aquifer Water Quality Standard; and
    5. any malfunction or failure of pollution control devices or other equipment or process.
2. The facility is no longer on alert status once the operational indicator no longer indicates that a PL is being exceeded. The permittee shall, however, complete all tasks necessary to return the facility to its pre-alert operating condition.

#### **2.6.2.2 Exceeding of Alert Levels Set for Discharge Monitoring**

1. If an AL set in Section 4.0, TABLES IA and IC have been exceeded, the permittee shall immediately investigate the cause of the AL being exceeded. The investigation shall include the following:
  - a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the AL being exceeded;
  - b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences.
2. The permittee shall initiate actions identified in the approved contingency plan referenced in Part 5.0 and specific contingency measures identified in Part 2.6 to resolve any problems identified by the investigation which may have led to an AL being exceeded. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6.
3. Within thirty (30) days after confirmation of an AL being exceeded, the permittee shall submit the laboratory results to the ADEQ Water Quality Compliance Section, Data Unit, along with a summary of the findings of the investigation, the cause of the AL being exceeded, and actions taken to resolve the problem.

4. Upon review of the submitted report, the Department may require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.

#### **2.6.2.3 Exceeding of Alert Levels in Groundwater Monitoring**

##### **2.6.2.3.1 Alert Levels for Indicator Parameters**

Not required at time of permit issuance.

##### **2.6.2.3.2 Alert Levels for Pollutants with Numeric Aquifer Water Quality Standards**

Not required at time of permit issuance.

##### **2.6.2.3.3 Alert Levels to Protect Downgradient Users from Pollutants Without Numeric Aquifer Water Quality Standards**

Not required at time of permit issuance.

#### **2.6.3 Discharge Limitations (DL) Violations**

1. If a DL set in Section 4.0, TABLES IA, 1B or 1C have been exceeded, the permittee shall immediately investigate to determine the cause of the violation. The investigation shall include the following:
  - a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the violation;
  - b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences;
2. The permittee also shall submit a report according to Section 2.7.3, which includes a summary of the findings of the investigation, the cause of the violation, and actions taken to resolve the problem. The permittee shall consider and ADEQ may require corrective action that may include control of the source of discharge, cleanup of affected soil, surface water or groundwater, and mitigation of the impact of pollutants on existing uses of the aquifer. Corrective actions shall either be specifically identified in this permit, included in an ADEQ approved contingency plan, or separately approved according to Section 2.6.6.
3. Upon review of the submitted report, the Department may require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.

#### **2.6.4 Aquifer Quality Limit (AQL) Violation**

Not Applicable.

#### **2.6.5 Emergency Response and Contingency Requirements for Spills and Unauthorized Discharges**

##### **2.6.5.1 Duty to Respond**



The permittee shall act immediately to correct any condition resulting from a discharge if that condition could pose an imminent and substantial endangerment to public health or the environment.

#### **2.6.5.2 Discharge of Hazardous Substances or Spills of Toxic Pollutants**

In the event of any unauthorized discharge (A.R.S. § 49-201(12)) of suspected hazardous substances (A.R.S. § 49-201(18)) or any spills of toxic pollutants (A.R.S. § 49-243(I)) on the facility site, the permittee shall promptly isolate the area and attempt to identify the spilled material. The permittee shall record information, including name, nature of exposure and follow-up medical treatment, if necessary, on persons who may have been exposed during the incident. Spilled materials, absorbents, and contaminated media generated during emergency response shall be removed and disposed of according to applicable federal, state and local regulations. The permittee shall notify the ADEQ Water Quality Field Services Unit at (602) 771-4841 within 24-hours upon discovering the discharge of hazardous material which: a) has the potential to cause an AWQS or AQL to be exceeded; or b) could pose an endangerment to public health or the environment.

#### **2.6.5.3 Discharge of Non-hazardous Materials**

In the event of any unauthorized discharge of non-hazardous materials from the facility, the permittee shall promptly attempt to cease the discharge and isolate the discharged material. Discharged material shall be removed and the site cleaned up as soon as possible. The permittee shall notify the ADEQ Water Quality Field Services Unit at (602) 771-4841, within 24-hours upon discovering the discharge of non-hazardous material which: a) has the potential to cause an AQL to be exceeded; or b) could pose an endangerment to public health or the environment.

#### **2.6.5.4 Reporting Requirements**

The permittee shall submit a written report for any unauthorized discharges described in Sections 2.6.5.2 and 2.6.5.3 to ADEQ Water Quality Field Services Unit, Mail Code: 5415B-1, 1110 West Washington Street, Phoenix, AZ, within thirty days of the discharge or as required by subsequent ADEQ action. The report shall summarize the event, including any human exposure, and facility response activities and include all information specified in Section 2.7.3. If a notice is issued by ADEQ subsequent to the discharge notification, any additional information requested in the notice shall also be submitted within the time frame specified in that notice. Upon review of the submitted report, ADEQ may require additional monitoring or corrective actions.

#### **2.6.6 Corrective Actions**

Specific contingency measures identified in Part 2.6 have already been approved by ADEQ and do not require written approval to implement.

With the exception of emergency response actions taken under Section 2.6.5, the permittee shall obtain written approval from the Water Permits Section prior to implementing a corrective action to accomplish any of the following goals in response to exceeding an AL or violation of an AQL, DL, or other permit condition:

1. Control of the source of an unauthorized discharge;

2. Soil cleanup;
3. Cleanup of affected surface waters;
4. Cleanup of affected parts of the aquifer;
5. Mitigation to limit the impact of pollutants on existing uses of the aquifer.

Within 30 days of completion of any corrective action, the operator shall submit to the ADEQ Water Quality Compliance Section, a written report describing the causes, impacts, and actions taken to resolve the problem.

## **2.7 Reporting and Recordkeeping Requirements**

[A.R.S. § 49-243(K)(2) and A.A.C. R18-9-A206(B) and R18-9-A207]

### **2.7.1 Self Monitoring Report Forms (SMRF)**

1. The permittee shall complete the SMRFs provided by ADEQ, and submit them to the Water Quality Compliance Section, Data Unit.
2. The permittee shall complete the SMRF to the extent that the information reported may be entered on the form. If no information is required during a quarter, the permittee shall enter "not required" on the SMRF and submit the report to ADEQ. The permittee shall use the format devised by ADEQ.
3. The tables contained in Sections 4.0 list the parameters to be monitored and the frequency for reporting results for groundwater compliance monitoring. Monitoring methods shall be recorded on the SMRFs. The permittee reserves the right to request a relaxation of the monitoring frequency for metals and volatile organic compounds if the data indicate that water quality standards are being achieved.
4. In addition to the SMRF, the information contained in Section 6.9.3 shall be included for exceeding an AL or violation of an AQL, DL, or any other permit condition being reported in the current reporting period.

### **2.7.2 Operation Inspection / Log Book Recordkeeping**

A signed copy of this permit shall be maintained at all times at the location where day-to-day decisions regarding the operation of the facility are made. A log book (paper copies, forms or electronic data) of the inspections and measurements required by this permit shall be maintained at the location where day-to-day decisions are made regarding the operation of the facility. The log book shall be retained for ten years from the date of each inspection, and upon request, the permit and the log book shall be made immediately available for review by ADEQ personnel. The information in the log book shall include, but not be limited to, the following information as applicable:

1. Name of inspector;
2. Date and shift inspection was conducted;
3. Condition of applicable facility components;
4. Any damage or malfunction, and the date and time any repairs were performed;
5. Documentation of sampling date and time;
6. Any other information required by this permit to be entered in the log book, and
7. Monitoring records for each measurement shall comply with R18-9-A206(B)(2).

### **2.7.3 Permit Violation and Alert Level Status Reporting**

1. The permittee shall notify the Water Quality Compliance Section, Enforcement Unit in writing within five days (except as provided in Section 2.6.5) of becoming aware of a violation of any permit condition, discharge limitation or of an Alert Level being exceeded.
2. The permittee shall submit a written report to the Water Quality Compliance Section, Enforcement Unit within 30 days of becoming aware of the violation of any permit condition or discharge limitation. The report shall document all of the following:
  - a. Identification and description of the permit condition for which there has been a violation and a description of its cause.
  - b. The period of violation including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue.
  - c. Any corrective action taken or planned to mitigate the effects of the violation, or to eliminate or prevent a recurrence of the violation.
  - d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an Aquifer Water Quality Standard.
  - e. Proposed changes to the monitoring which include changes in constituents or increased frequency of monitoring.
  - f. Description of any malfunction or failure of pollution control devices or other equipment or processes.

#### **2.7.4 Operational, Other or Miscellaneous Reporting**

The permittee shall complete the Self-Monitoring Report Form provided by the Department to reflect facility inspection requirements designated in Section 4.0, TABLE III and submit to the ADEQ, Water Quality Compliance Section quarterly along with other reports required by this permit. Facility inspection reports shall be submitted no less frequently than quarterly, regardless of operational status.

The permittee shall submit the results of water quality testing for total nitrogen, fecal coliform, turbidity and flow volumes to any of the following in accordance with A.A.C. R18-9-703(C)(2)(c):

1. Any reclaimed water agent who has contracted for delivery of reclaimed water from the permittee;
2. Any end user who has not waived interest in receiving this information

#### **2.7.5 Reporting Location**

All SMRFs shall be submitted to:

Arizona Department of Environmental Quality  
Water Quality Compliance Section, Data Unit  
Mail Code: 5415B-1  
1110 W. Washington Street  
Phoenix, AZ 85007  
Phone (602) 771-4681

All documents required by this permit to be submitted to the Water Quality Compliance Section shall be directed to:

Water Quality Compliance Section, Enforcement Unit  
Mail Code: 5415B-1  
1110 W. Washington Street  
Phoenix, AZ 85007  
Phone (602) 771-4614

All documents required by this permit to be submitted to the Water Permits Section shall be directed to:

Arizona Department of Environmental Quality  
Water Permits Section  
Mail Code: 5415B-3  
1110 W. Washington Street  
Phoenix, AZ 85007  
Phone (602) 771-4428

#### 2.7.6 Reporting Deadline

The following table lists the quarterly report due dates:

Monitoring conducted during quarter:	Quarterly Report due by:
January-March	April 30
April-June	July 30
July-September	October 30
October-December	January 30

#### 2.7.7 Changes to Facility Information in Section 1.0

The Water Permits Section and Water Quality Compliance Section shall be notified within 10 days of any change of facility information including Facility Name, Permittee Name, Mailing or Street Address, Facility Contact Person or Emergency Telephone Number.

#### 2.8 Temporary Cessation [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A209(A)]

The permittee shall give written notice to the ADEQ Water Quality Compliance Section upon ceasing operation of the facility for a period of 60 days or greater. The permittee shall take the following measures upon temporary cessation:

1. If applicable, direct the wastewater flows from the facility to another State approved wastewater treatment facility.
2. Correct the problem that caused the temporary cessation of the facility.
3. Notify ADEQ with a monthly facility Status Report describing the activities conducted on the WWTP to correct the problem

At the time of notification the permittee shall submit for ADEQ approval a plan for maintenance of discharge control systems and for monitoring during the period of temporary cessation. Immediately following ADEQ's approval, the permittee shall implement the approved plan. If necessary, ADEQ shall amend permit conditions to incorporate conditions to address temporary cessation. If the facility ceases operation, the permittee shall submit closure notification, as set forth in Section 2.9 below.

## **2.9 Closure [A.R.S. §§ 49-243(K)(6), 49-252 and A.A.C. R18-9-A209(B)]**

The permittee shall give written notice of closure to the Water Quality Compliance Section before closing, or before ceasing use of a facility addressed under this permit if the cessation is projected to last more than three years.

### **2.9.1 Closure Plan**

Within 90 days following notification of closure, the permittee shall submit for approval to the Water Permits Section, a detailed Closure Plan which meets the requirements of A.R.S. § 49-252 and A.A.C. R18-9-A209(B)(1)(a).

If the closure plan achieves clean closure immediately, ADEQ shall issue a letter of approval to the permittee. If the closure plan contains a schedule for bringing the facility to a clean closure configuration at a future date, ADEQ may incorporate any part of the schedule as an amendment to this permit.

### **2.9.2 Closure Completion**

Upon completion of closure activities, the permittee shall give written notice to the Water Permits Section indicating that the approved Closure Plan has been implemented fully and providing supporting documentation to demonstrate that clean closure has been achieved (soil sample results, verification sampling results, groundwater data, as applicable). If clean closure has been achieved, ADEQ shall issue a letter of approval to the permittee at that time. If any of the following conditions apply, the permittee shall follow the terms of Post-Closure stated in this permit:

1. Clean closure cannot be achieved at the time of closure notification or within one year thereafter under a diligent schedule of closure actions;
2. Further action is necessary to keep the facility in compliance with aquifer water quality standards at the applicable point of compliance;
3. Continued action is required to verify that the closure design has eliminated discharge to the extent intended;
4. Remedial or mitigative measures are necessary to achieve compliance with Title 49, Ch. 2;
5. Further action is necessary to meet property use restrictions.

## **2.10 Post-Closure [A.R.S. §§ 49-243(K)(6), 49-252 and A.A.C. R18-9 A209(C)]**

Post-closure requirements shall be established based on a review of facility closure actions and will be subject to review and approval by the Water Permits Section.

In the event clean closure cannot be achieved pursuant to A.R.S. § 49-252, the permittee shall submit for approval to the Water Permits Section a Post-Closure Plan that addresses post-closure maintenance and monitoring actions at the facility. The Post-Closure Plan shall meet all requirements of A.R.S. §§ 49- 201(29) and 49-252 and A.A.C. R18-9-A209(C). Upon

approval of the Post-Closure Plan, this permit shall be amended or a new permit shall be issued to incorporate all post-closure controls and monitoring activities of the Post-Closure Plan.

**2.10.1 Post-Closure Plan**

A specific post closure plan may be required upon the review of the closure plan.

**2.10.2 Post-Closure Completion**

Not required at the time of permit issuance.

**3.0 COMPLIANCE SCHEDULE** [A.R.S. § 49-243(K)(5) and A.A.C. R18-9-A208]

Not Applicable

## 4.0 TABLES OF MONITORING REQUIREMENTS

TABLE I A  
ROUTINE DISCHARGE MONITORING

Sampling Point Number	Sampling Point Identification		Latitude		Longitude
1	Effluent Wet Well		33° 31' 14" N		112° 18' 12" W
Parameter	AL <sup>1</sup>	DL <sup>2</sup>	Units	Sampling Frequency	Reporting Frequency
Flow Daily: Total Flow <sup>3</sup>	Not Established (NE)	Not Established <sup>4</sup>	MGD <sup>5</sup>	Daily <sup>6</sup>	Quarterly
Flow Average Monthly: Total Flow	10.9	11.5	MGD	Calculated Monthly <sup>7</sup>	Quarterly
Flow Daily : Reuse	NE	NE	MGD	Daily	Quarterly
Flow Average Monthly: Reuse	10.9	11.5	MGD	Monthly	Quarterly
Flow Daily: Recharge	NE	NE	MGD	Daily	Quarterly
Flow Average Monthly: Recharge	10.9	11.5	MGD	Calculated Monthly	Quarterly
Fecal Coliform Single sample maximum	NE	23	CFU or MPN <sup>8</sup>	Monthly	Quarterly
Fecal Coliform Seven sample median	NE	2.2	CFU or MPN	Monthly	Quarterly
Total Nitrogen <sup>9</sup> : 5-sampling rolling geometric mean.	8.0	10.0	mg/l	Monthly <sup>10</sup>	Quarterly

<sup>1</sup> AL = Alert Level.<sup>2</sup> DL = Discharge Limit.<sup>3</sup> Total flow is flow to reuse site and recharge sites.<sup>4</sup> Not Established = NE. Monitoring required but no limits have been specified at time of permit issuance.<sup>5</sup> MGD = Million Gallons per Day.<sup>6</sup> Flow shall be measured using a continuous recording flow meter.<sup>7</sup> Monthly = Calculated value = Average of daily flows in a month.<sup>8</sup> CFU = Colony Forming Units / 100 ml sample. MPN = Most Probable Number / 100 ml sample<sup>9</sup> Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen.<sup>10</sup> A 5-Month Geometric Mean of the results of the 5 most recent monthly samples.



## 4.0 TABLES OF MONITORING REQUIREMENTS

**TABLE IA**  
**ROUTINE DISCHARGE MONITORING (Continued)**

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
<b>Metals (Total)<sup>11</sup>:</b>					
Antimony	0.0048	0.006	mg/l	Quarterly	Quarterly
Arsenic	0.04	0.05	mg/l	Quarterly	Quarterly
Barium	1.60	2.00	mg/l	Quarterly	Quarterly
Beryllium	0.0032	0.004	mg/l	Quarterly	Quarterly
Cadmium	0.004	0.005	mg/l	Quarterly	Quarterly
Chromium	0.08	0.1	mg/l	Quarterly	Quarterly
Cyanide (As free cyanide)	0.16	0.2	mg/l	Quarterly	Quarterly
Fluoride	3.2	4.0	mg/l	Quarterly	Quarterly
Lead	0.04	0.05	mg/l	Quarterly	Quarterly
Mercury	0.0016	0.002	mg/l	Quarterly	Quarterly
Nickel	0.08	0.1	mg/l	Quarterly	Quarterly
Selenium	0.04	0.05	mg/l	Quarterly	Quarterly
Thallium	0.0016	0.002	mg/l	Quarterly	Quarterly

<sup>11</sup>

If the Discharge Limit for listed pollutants has not been exceeded in all of eight (8) consecutive quarters, the owner or operator may apply to ADEQ's Water Permits Section to request this permit so as to reduce sampling and reporting frequencies for these pollutants.

## 4.0 TABLES OF MONITORING REQUIREMENTS

TABLE 1A  
ROUTINE DISCHARGE MONITORING (Continued)

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Volatile Organic Compounds (VOCs) <sup>12</sup> :					
Benzene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Carbon tetrachloride	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
o-Dichlorobenzene	0.48	0.6	mg/l	Semi-Annually	Semi-Annually
para-Dichlorobenzene	0.06	0.075	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	0.0056	0.007	mg/l	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	0.05	0.07	mg/l	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloropropane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Ethylbenzene	0.56	0.7	mg/l	Semi-Annually	Semi-Annually
Monochlorobenzene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Styrene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Tetrachloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Toluene	0.8	1.0	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	0.16	0.2	mg/l	Semi-Annually	Semi-Annually
1,2,4 - Trichlorobenzene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
1,1,2 - Trichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Trichloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Vinyl Chloride	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Xylenes (Total)	8.0	10.0	mg/l	Semi-Annually	Semi-Annually

<sup>12</sup>

If the Discharge Limit for listed pollutants has not been exceeded in all of eight (8) consecutive quarters, the owner or operator may apply to ADEQ's Water Permits Section to request this permit so as to reduce sampling and reporting frequencies for these pollutants. AL = Alert Level. DL = Discharge Limit. The ALs and DLs are maximum numbers unless otherwise indicated.

## 4.0 TABLES OF MONITORING REQUIREMENTS

**TABLE 1B**  
**RECLAIMED WATER MONITORING TABLE - CLASS A+<sup>13</sup>**

Sampling Point Number	Sampling Point Identification		Latitude		Longitude
1	Effluent Wet Well		33° 31' 14" N		112° 18' 12" W
Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Fecal Coliform: Single-sample maximum	NE	23	CFU or MPN <sup>14</sup>	Daily <sup>15</sup>	Quarterly
Fecal Coliform: Four (4) of last seven (7) samples	NE	Non-detect <sup>16</sup>	CFU or MPN	Daily	Quarterly
Turbidity <sup>17</sup> Single reading	NE	5	NTU <sup>18</sup>	Everyday <sup>19</sup>	Quarterly
Turbidity: 24-hour average	NE	2	NTU	Everyday	Quarterly

<sup>13</sup> Reclaimed water monitoring under Table 1B will be performed anytime effluent is discharged to the reuse site and is in addition to routine discharge monitoring required under Table 1A.

<sup>14</sup> CFU = Colony Forming Units per 100 ml: MPN = Most Probable Number per 100 ml. For CFU, a value of <1 shall be considered to be non-detect. For MPN, a value of <2.2 shall be considered to be non-detect.

<sup>15</sup> For fecal coliform, "daily" sampling means every day in which a sample can practicably be obtained and delivered in sufficient time for proper analysis, provided that no less than four (4) samples in each calendar week are obtained and analyzed.

<sup>16</sup> If at least four (4) out of the last seven (7) samples are non-detect, report "yes" in the appropriate space on the SMRF (indicating that the standard has been met). However, if at least four (4) out of the last seven (7) samples have detections of fecal coliform, report "no" in the appropriate space on the SMRF (indicating that the standard has not been met).

<sup>17</sup> Turbidity shall be measured with an instrument with a signal averaging time not exceeding 120 seconds. An occasional spike due to back-flushing or instrument malfunction shall not be considered an exceedance. All exceedances must be explained and submitted to the Department with the corresponding quarterly SMRF.

<sup>18</sup> Nephelometric Turbidity Units.

<sup>19</sup> For the single turbidity reading, "everyday" means the maximum reading during the 24-hour period.

**TABLE IC**  
**THM MONITORING IN TWO DISCHARGE LINES**

Sampling Point Number	Sampling Point Identification		Latitude		Longitude	
2	Discharge line to ARF Recharge site		33° 31' 15" N		112° 18' 15" W	
3	Discharge line to NAUSP Recharge site		33° 31' 09" N		112° 18' 10" W	
Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency	
Trihalomethanes (total) <sup>20</sup>	0.08	0.1	mg/l	Monthly	Quarterly	

#### 4.0 TABLES OF MONITORING REQUIREMENTS

**TABLE II**  
**GROUNDWATER MONITORING**  
**NOT REQUIRED IN THIS PERMIT**

**TABLE III**  
**FACILITY INSPECTION (operational monitoring)**

Pollution Control Structures/Parameter	Performance Levels	Inspection Frequency
Pump Integrity	Good Working Condition	Weekly
Treatment Plant Components	Good Working Condition	Weekly

<sup>20</sup>

Total Trihalomethanes (THMs) comprise of Bromoform, Bromodichloromethane, Chloroform, and Dibromochloromethane.

**5.0 REFERENCES AND PERTINENT INFORMATION**

The terms and conditions set forth in this permit have been developed based upon the information contained in the following, which are on file with the Department:

1. APP Application, dated: 6/23/1998 (original APP), 5/2/2003 (sig. amend.)
2. Contingency Plan, dated: 5/2/2003 (sig. amend)
3. Final Hydrologist Report, dated: 12/13/2004
4. Final Engineering Report, dated: September 17, 2004 (sig. amend.)
5. Public Notice, dated: 11/12/98 (original APP), ????? (sig. amend)
6. Public Hearing dated: N/A
7. Responsiveness Summary, dated: N/A

**6.0 GENERAL CONDITIONS AND RESPONSIBILITIES****6.1 Annual Registration Fees**

The permittee is notified of the obligation to pay an Annual Registration Fee to ADEQ. The Annual Registration Fee is based upon the amount of daily influent or discharge of pollutants in gallons per day as established by A.R.S. § 49-242(D). This fee is payable to ADEQ each year.

**6.2 Duty to Comply [A.R.S. §§ 49-221 through 263]**

The permittee is notified of the obligation to comply with all conditions of this permit and all applicable provisions of Title 49, Chapter 2, Articles 1, 2 and 3 of the Arizona Revised Statutes, Title 18, Chapter 9, Articles 1 through 4, and Title 18, Chapter 11, Article 4 of the Arizona Administrative Code. Any permit non-compliance constitutes a violation and is grounds for an enforcement action pursuant to Title 49, Chapter 2, Article 4 or permit amendment, suspension, or revocation.

**6.3 Duty to Provide Information [A.R.S. §§ 49-243(K)(2) and 49-243(K)(8)]**

The permittee shall furnish to the Director, or an authorized representative, within a time specified, any information which the Director may request to determine whether cause exists for amending or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

**6.4 Severability [A.R.S. § 49-243(K)(8)]**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

**6.5 Proper Operation and Maintenance [A.R.S. § 49-243(K)(8)]**

The permittee shall properly operate and maintain all facilities, treatment processes, and discharge control systems which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

**6.6 Compliance with Aquifer Water Quality Standards [A.R.S. §§ 49-243(B)(2) and 49-243(B)(3)]**

The permittee shall not cause or contribute to a violation of an aquifer water quality standard at the applicable point of compliance for the facility. Where, at the time of issuance of the permit, an aquifer already exceeds an aquifer water quality standard for a pollutant, the permittee shall not discharge that pollutant so as to further degrade, at the applicable point of compliance for the facility, the water quality of any aquifer for that pollutant.

**6.7 Technical and Financial Capability [A.R.S. §§ 49-243(K)(8) and 49-243(N) and A.A.C. R18-9-A202(B) and R18-9-A203(E) and (F)]**

The permittee shall have and maintain the technical and financial capability necessary to fully carry out the terms and conditions of this permit. Any bond, insurance policy, trust fund, or other financial assurance mechanism provided as a demonstration of financial capability in

the permit application, pursuant to A.A.C. R18-9-A203(D), shall be in effect prior to any discharge authorized by this permit and shall remain in effect for the duration of the permit.

**6.8 Reporting of Bankruptcy or Environmental Enforcement [A.A.C. R18-9-A207(C)]**

The permittee shall notify the Director within five days after the occurrence of any one of the following:

1. The filing of bankruptcy by the permittee.
2. The entry of any order or judgment not issued by the Director against the permittee for the enforcement of any environmental protection statute or rule.

**6.9 Monitoring and Records [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A206]**

The permittee shall conduct any monitoring activity necessary to assure compliance with this permit, with the applicable water quality standards established pursuant to A.R.S. §§ 49-221 and 49-223 and §§ 49-241 through 49-252.

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. The permittee shall retain records of all monitoring information, including copies of all reports required by this permit and records of all data used to complete the application for this permit, for a period of 10 years from the date of the sample, measurement report, or application. This period may be extended by request of the Director at any time.
3. At a minimum, records of monitoring information shall include:
  - a. Date, time, and exact place of sampling or measurements;
  - b. Individual(s) who performed the sampling or measurements;
  - c. Date(s) analyses were performed;
  - d. Individual(s) or laboratory who performed the analyses;
  - e. Analytical techniques or methods used;
  - f. Results of such analyses;
  - g. Chain of custody records;
  - h. Names of samples;
  - i. Static water level in monitor well prior to sampling;
  - j. Sampling method;
  - k. Purging volume;
  - l. Indicator parameters including field conductance ( $\mu\text{mhos/cm}$ ), field temperature ( $^{\circ}\text{C}$ ), and field pH (standard units);
  - m. Preservation and transportation procedures;
  - n. Name of the analytical facility, and;
  - o. Any field notes relating to the information described in (a) – (n) above.

**6.10 Other Information [A.R.S. § 49-243(K)(8)]**

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, the permittee shall promptly submit the correct facts or information.

**6.11 Inspection and Entry [A.R.S. §§ 49-203(B) and 49-243(K)(8)]**

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to enter and inspect the facility

as reasonably necessary to ensure compliance with Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes, and Title 18, Chapter 9, Articles 1 through 4 of the Arizona Administrative Code and the terms and conditions of this permit. In so doing, the Department representative may:

1. Enter upon the operator's premises where a regulated facility or activity is located or conducted, or locations where records must be kept under the conditions of this permit.
2. Have access to and copy, at reasonable times, any records required to be kept under the conditions of this permit.
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance, any substances or parameters at any location.
5. Take photographs or video tape.
6. Take other actions reasonably necessary to determine compliance with Aquifer Protection Permit statutes or rules or the terms and conditions of this permit.

**6.12 Duty to Modify [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A211]**

The permittee shall apply for and receive a written amendment before deviating from any of the designs or operational practices authorized by this permit.

**6.13 Permit Action: Amendment, Transfer, Suspension & Revocation [A.R.S. §§ 49-201, 49-241 through 251, A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]**

This permit may be amended, transferred, renewed, or revoked for cause, under the rules of the Department. The filing of a request by the permittee for a permit action does not stay or suspend the effectiveness of any existing permit condition. The Director shall issue a public notice of all proposed permit actions pursuant to A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213.

**6.13.1 Permit Reopen**

The Director may reopen this permit and amend it pursuant to A.A.C. R18-9-A211.

**6.13.2 Permit Transfer**

This permit may not be transferred to any other person except after notice to and approval of the transfer by the Department. No transfer will be approved until the applicant complies with all transfer requirements as specified in A.A.C. R18-9-A212(B) and (C).

The permittee shall notify the Water Permits Section in writing within 15 days after any change in the owner or operator of the facility. The notification shall state the permit number, the name of the facility, the date of property transfer, and the name, address, and phone number where the new owner or operator can be reached. The operator shall advise the new owner or operators of the terms of this permit and the need for permit transfer in accordance with the rules.



# THE ARIZONA REPUBLIC

**PUBLIC HEARING ON THE DRAFT MAG 208 WATER QUALITY MANAGEMENT PLAN AMENDMENT FOR THE CITY OF GLENDALE WEST AREA WATER RECLAMATION FACILITY, ARIZONA, POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT DISCHARGE**

Wednesday, October 12, 2005  
at 3:00 p.m.  
MAG Office, Suite 200, Saguaro Room, 302 North 1st Avenue, Phoenix, Arizona 85003

The Maricopa Association of Governments (MAG) will conduct a public hearing on the Draft MAG 208 Plan Amendment for the City of Glendale West Area Water Reclamation Facility, Arizona Pollutant Discharge Elimination System (AZPDES) Permit Discharge. The purpose of the hearing is to receive public comments on the draft amendment.

The West Area Water Reclamation Facility is identified in the current MAG 208 Plan with an ultimate capacity of 15 million gallons per day and reclaimed water being disposed of through reuse and recharge. This amendment would identify an AZPDES permit discharge for the West Area Water Reclamation Facility to accommodate future effluent discharges into the New River.

Following consideration of comments received, it is anticipated that the MAG Water Quality Advisory Committee will make a recommendation to the MAG Management Committee. On November 9, 2005, the MAG Management Committee is anticipated to make a recommendation to the MAG Regional Council. It is anticipated that the MAG Regional Council will take action on the draft plan amendment on December 14, 2005.

The draft document will be available for public review at the MAG Office, from 8:00 a.m. to 5:00 p.m. Monday through Friday, beginning Monday, August 29, 2005. Copies will also be available for review at the Glendale Public Library, 5959 West Brown Street, City of Mesa Library, 64 East First Street, and Phoenix Central Public Library, 1221 North Central Avenue. Public comments are welcome at the hearing, or may be submitted in writing by 3:00 p.m. on October 12, 2005 to MAG staff at the address below.

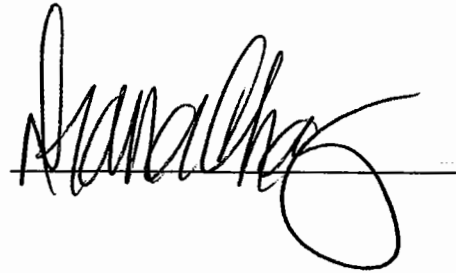
Contact Person: Julie Hoffman, 302 North 1st Avenue, Suite 200 Phoenix, Arizona 85003 Fax: (602) 254-6490 05545-August 25, 2005

STATE OF ARIZONA  
COUNTY OF MARICOPA } SS.

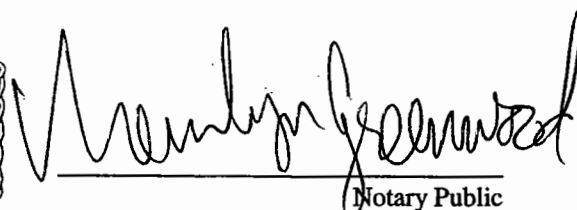
Diana Chavez, being first duly sworn, upon oath deposes and says: That she is a legal advertising representative of the Arizona Business Gazette, a newspaper of general circulation in the county of Maricopa, State of Arizona, published at Phoenix, Arizona, by Phoenix Newspapers, Inc., which also publishes The Arizona Republic, and that the copy hereto attached is a true copy of the advertisement published in the said paper on the dates as indicated.

The Arizona Republic

August 25, 2005



Sworn to before me this  
25<sup>TH</sup> day of  
August A.D. 2005

Notary Public

August 25, 2005

TO: Interested Parties for Water Quality

FROM: Julie Hoffman, Environmental Planner

SUBJECT: PUBLIC HEARING ON THE DRAFT MAG 208 WATER QUALITY MANAGEMENT PLAN AMENDMENT FOR THE CITY OF GLENDALE WEST AREA WATER RECLAMATION FACILITY ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT DISCHARGE

Public Hearing

October 12, 2005 at 3:00 p.m.  
MAG Office, Saguaro Room  
302 North 1<sup>st</sup> Avenue, Second Floor  
Phoenix, Arizona 85003

The Maricopa Association of Governments (MAG) will conduct a public hearing on the Draft MAG 208 Water Quality Management Plan Amendment for the City of Glendale West Area Water Reclamation Facility Arizona Pollutant Discharge Elimination System (AZPDES) Permit Discharge. The purpose of the hearing is to receive public comments on the draft plan amendment.

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For your information and convenience, a copy of the public hearing notice is enclosed. The draft document is available for public review at the MAG Office, third floor from 8:00 a.m. to 5:00 p.m. Monday through Friday. Copies are also available for review at the Glendale Public Library, 5959 West Brown Street; City of Mesa Library, 64 East First Street; and Phoenix Central Public Library, 1221 North Central Avenue. For further information or to submit written comments on the draft amendment prior to the hearing, please contact me at (602) 254-6300.

**PUBLIC HEARING ON THE DRAFT MAG 208 WATER QUALITY MANAGEMENT PLAN  
AMENDMENT FOR THE CITY OF GLENDALE WEST AREA WATER RECLAMATION  
FACILITY ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT  
DISCHARGE**

Wednesday, October 12, 2005 at 3:00 p.m.  
MAG Office, Suite 200 - Saguaro Room  
302 North 1<sup>st</sup> Avenue  
Phoenix, Arizona 85003

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Contact Person: Julie Hoffman  
302 North 1<sup>st</sup> Avenue, Suite 300  
Phoenix, Arizona 85003  
Fax: (602) 254-6490

MARICOPA ASSOCIATION OF GOVERNMENTS  
WATER QUALITY ADVISORY COMMITTEE  
MEETING AND PUBLIC HEARING ON THE  
DRAFT MAG 208 WATER QUALITY MANAGEMENT  
PLAN AMENDMENT FOR THE CITY OF  
GLENDALE WEST AREA WATER RECLAMATION  
FACILITY ARIZONA POLLUTANT DISCHARGE  
ELIMINATION SYSTEM PERMIT DISCHARGE

Phoenix, Arizona  
October 12, 2005  
3:00 p.m.

**Glennie**  
Reporting Services

5333 North 7th Street  
Suite B110  
Phoenix, Arizona 85014-2840

(602) 266-6535 Phone  
(602) 266-9661 Fax

Prepared by:  
Janet Hauck, RPR  
Arizona Certified  
Reporter Number 50522

Prepared for:  
Maricopa Association  
of Governments

(Copy)

1           The Public Hearing was taken on October 12,  
2   2005, commencing at 3:00 p.m., at the offices of the  
3   Maricopa Association of Governments, 302 North 1st  
4   Avenue, Suite 200, Phoenix, Arizona, before  
5   JANET HAUCK, RPR, a Certified Reporter, Certificate No.  
6   50522, for the State of Arizona.

7   **Committee Members Present:**

8   Roger Klingler, City of Scottsdale, Chair  
9   Greg Stack, City of Avondale  
10   Lucky Roberts, Town of Buckeye  
11   Michael Salisbury, City of El Mirage  
12   Chris Ochs, City of Glendale  
13   Robert Hollander, City of Phoenix  
14   Rich Williams, Sr., City of Surprise  
15   David McNeil, City of Tempe  
16   Dale Bodiya, Maricopa County  
17   John Boyer, Arizona Public Service Company  
18   Eugene Jensen, Citizen Representative

19   **Committee Members Attending**  
20   **by Telephone Conference Call:**

21   David Iwanski, City of Goodyear  
22   Jacqueline Strong, City of Chandler  
23   Bill Haney, City of Mesa  
24   Shawn Kreuzweisner, City of Peoria

25   **Others Present:**

26   Ken Reedy, City of Glendale  
27   Russell Fletcher, City of Glendale  
28   John Dannan, Pulte Homes  
29   Matt Cox, Lennar Homes  
30   Brian Rosenbaum, Lennar Homes  
31   David Gordon, Malcolm Pirnie  
32   Cathy Charney, Town of Buckeye  
33   Ajay Kashi, RBF Consulting  
34   Michael Worlton, RBF Consulting  
35   Julie Hoffman, Maricopa Association of Governments  
36   Ann Wimmer, Maricopa Association of Governments

\* \* \*

MR. KLINGLER: Next item of business is to have a public hearing. I would like to now open the public hearing on the Draft MAG 208 Plan Amendment for the City of Glendale West Area Water Reclamation Facility Arizona Pollutant Discharge Elimination System Permit Discharge.

We begin with a briefing on the draft amendment. Then following the briefing, hearing participants are invited to make comments for the public record. A court reporter is present to provide an official record of the hearing. Written comments are also welcome. For those who wish to speak on the Draft Amendment, please fill out a yellow card and hand it to the MAG staff.

Russell Fletcher of Glendale will provide the briefing on the Draft Glendale 208 Amendment. Russell.

MR. FLETCHER: First of all, I'd like to thank the Water Quality Advisory Committee for allowing Glendale to present our case for our river discharge.

I am Russell Fletcher, the senior civil engineer and project manager for our expansion of the West Area Water Reclamation Facility. We expanded from 7 mgd to 10 mgd nominally. And we plan to recharge our

1 water, and we do reuse some of our water within our  
2 lake system that we started in Glendale. And we will  
3 participate someday in the future in a NAUSP recharge  
4 facility that's being directed by Salt River Project.

5 We have asked for a river discharge for what  
6 we call an emergency discharge, and that's why we're  
7 here today. We presented at the last meeting, and now  
8 we're presenting for our public hearing. The  
9 reclamation facility does produce A+ reclaimed water.  
10 Again, we went from 4.3 to 10 mgd, and we do have room  
11 at our site for up to 15 mgd if we could get enough low  
12 flow out of our Camelback Trunk sewer. But right now,  
13 we're at 10. We have been running 10 mgd and just  
14 about finished our process September just a month ago.

15 We do use direct reuse at our Coyote Lake  
16 adjacent to the Coyote Arena. It is a decorative lake  
17 with six fountains. You might have noticed them when  
18 you went to the winning game last Saturday when the  
19 Coyotes took that game. And we'll see you tomorrow  
20 night when they win their next game. Most of our  
21 effluent goes to recharge at our own aquifer recharge  
22 facility that's along Glendale Avenue at about 115th  
23 Avenue.

24 We wanted the river discharge so that we  
25 would have a little more flexibility. We're calling it

1 emergency discharge on our part. We would rather treat  
2 the water and reuse it, or treat the water and recharge  
3 it, than to treat the water and give it away to the  
4 State of Arizona to the riverbed. But if there is a  
5 time where we need to direct some of our effluent flow,  
6 either a portion of it or all of it, we wanted to be  
7 able to have that flexibility. Therefore, we turned in  
8 the application. So, it will not be a daily process.  
9 It's too valuable to give away, but it may have an  
10 infrequent use.

11 Currently, the wastewater plant is in the  
12 lower-left corner of our chart. We do have a reuse  
13 line that goes up to Glendale Avenue to our recharge  
14 facility. We have another 12-inch line that currently  
15 goes up to Glendale Avenue. It makes a right-hand  
16 turn, heads toward the Coyote Arena, and we do fill the  
17 Coyote Lake.

18 We have concluded a pipeline that's in red  
19 that goes to the NAUSP. We are the first member of  
20 that group to create something on that site. Our  
21 pipeline is buried. We have a flow meter installed.  
22 We have an empty vault that's ready to start pumping  
23 flow once we get the permit process finished and  
24 get that facility built.

25 Again, SRP NAUSP was to be in construction.



1 There's been some slight change in that construction  
2 schedule. So, we're still waiting on getting some  
3 permit approvals to start that NAUSP construction of  
4 spread basins.

5 We contacted the various agencies that are  
6 close to our area within our three-mile radius. You  
7 can see that Luke Air Force Base is rather close to us.  
8 We have our own Arrowhead Ranch water reclamation  
9 facility at the far north end of Glendale. That one  
10 has been in operation longer than the west area, but we  
11 sent out our letters, and we received permission or  
12 approval from most of the cities within our three-mile  
13 radius for this venture.

14 Again, on the right we have some of those  
15 cities that we contacted. Avondale, El Mirage,  
16 Litchfield Park, on down to Youngtown. We had one  
17 El Mirage that chose not to respond to our letter, but  
18 the others did respond and gave us approval of our  
19 request for a river discharge within that three-mile  
20 radius of the treatment plant.

21 Tried to make it simple. This is a repeat of  
22 what you heard before. We would certainly be able to  
23 entertain any questions. We have David Gordon, our  
24 consultant with Malcolm Pirnie Engineers, that assisted  
25 with this project for the river discharge application.

1           MR. KLINGLER: Thank you, Russell. What we  
2 generally do with the public hearing process is we'll  
3 open it to any public comments. And then the next  
4 item, we'll have the committee discuss it and see if  
5 there's any questions. So, if you would hang loose for  
6 that, I'd appreciate it.

7           MR. FLETCHER: I will.

8           MR. KLINGLER: But thank you for the  
9 presentation.

10          MR. FLETCHER: Thank you.

11          MR. KLINGLER: At this time, public comments  
12 are invited on the amendment. Julie, do we have any  
13 cards requesting to speak? Is there any members in the  
14 audience that didn't get a card in yet that want to  
15 make any public comment on this public hearing at this  
16 time? (No response.) Hearing none, I would ask that  
17 we now close the public hearing and request the court  
18 reporter to end the transcription. Thank you very  
19 much.

20                   (The public hearing portion of the  
21 proceedings adjourned at 3:11 p.m.)

22                               \*   \*   \*

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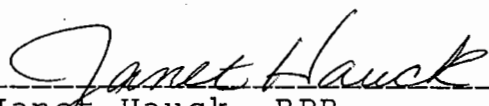
25

1 STATE OF ARIZONA )  
2 COUNTY OF MARICOPA )  
3

4 I, JANET HAUCK, a Certified Court Reporter,  
5 Certificate No. 50522, in the State of Arizona, do  
6 hereby certify that the foregoing pages constitute a  
7 full, true, and accurate transcript of all proceedings  
8 had in the foregoing matter, all done to the best of my  
9 skill and ability.

10  
11 I FURTHER CERTIFY that I am not related to  
12 nor employed by any of the parties hereto, and have no  
13 interest in the outcome hereof.

14  
15 WITNESS my hand this 25th day of October,  
16 2005.

17  
18   
19 Janet Hauck, RPR  
20 Arizona Certified  
21 Reporter No. 50522  
22  
23  
24  
25